

**VHF·UHF
DIGEST**

February 1969

STARTING THIS MONTH!

**ULTIMATE DX
INSTALLATION**

by ROBERT COOPER Jr.

OFFICIAL JOURNAL of WTFDA

VHF-UHF DIGEST

February, 1969

Volume 2, Number 2

is the official monthly publication of the
WORLDWIDE TV-FI DX ASSOCIATION. Published
about the first of each month at Milwaukee,
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make checks payable to the club at HQ:

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\$7.00/2 yr equivalent; samples 30¢.
\$10.00/3 yr For first class in N.Amer.
add \$1.50 per year. For
other rates, write HQ.

RENEWALS: this is the last issue
that will be sent to the following:

Breville, Walt	Janowiak, David
Cooper, Robt B.	Kamp, Steve
Draeb, Wm J.	Piggot, Bruce
Dyckman, John C.	Webster, Geo. G.
Fela, Jos. Jr.	Wheeler, Frank
Grubbs, Robt M.	

THIS MONTH'S COVER: designed by
Bill Heusmann (of exciting Steger,
Illinois), calls attention to a
new 4-part series beginning this
month. Concluding parts will be
published in March, April, May.
Twenty-four pages in all!

OUR EDITORIAL STAFF:

Publisher/president: F. Dombrowski
HQ staff this month: Gary Olson,
Ed Semrad and Dave Janowiak.
Editors:

HQ:	F.S. Dombrowski
FCC:	Gary A. Olson
CCI:	Bill Heusmann
FI:	Roger Winsor
VHF:	Robert E. Cooper
Eastern DX:	Lorrie Goldman
Western DX:	Dennis Smith
Techni-Corner:	Dave Janowiak
European Scene:	Roger Bunney
Contest editor:	Mike Northam
Statistics:	Glenn Hauser

Station lists are being typed up
by the girlfriend of Ed Semrad. A
total of four people volunteered
for this choice duty but Ed was
the first and he/they got the job.

BACK-ISSUES: are available at 25¢
each to members and 30¢ to oth-
ers. If you change your Address
and don't inform HQ in time, it
will be necessary to charge 25¢
for remailing; sorry about that.

Mike Northam's address for contest
suggestions is:

P. O. Box 605
Beaverton, Oregon 97005

During the past month the foll-
owing new members and renewals
were recorded at HQ:

Kowalsi, Ed	Goldman, Lorrie
Knepper, Dan	Jacoby, Robert
Luoma, Rod	Hauser, Glenn
Grade, Stu	Plunkett, Wayne
Dombrowski, F.S.	Cox, Dave
Schumann, Todd	Vogt, Larry
Nordquist, Fred	Grant, Bill
McArthur, Robert	

As noted elsewhere in this Digest
we shall be welcoming some new
editors shortly.

Bill Heusmann will take over
the CCI column, Michael Northam
will be our contest editor, and
we'll have Canadian DOT news at
long last; (thats the Canadian
equivalent of the American FCC.)
The editor has not been heard
from lately but we expect a col-
umn to begin next month.

Since an adequate contest has
never been attempted for TV, FI
and VHF before (to the best of my
knowledge), it will require time
to draw up rules and regulations
before a contest can be attempted.
Mike has never been a contest ed-
itor before and isn't too exper-
ienced as a DXer either above 30
MHz. So he will need all the sug-
gestions we can give him. There
have already been suggestions for
TV but not for any special rules
that may be needed for FI and VHF.
Most radio DX contests have multi-
pliers for variations in receiver,
antenna, station power & distance.
Frequency, tower height and prop-
agation mode may also be consid-
ered in UHF-VHF contests. Consid-
ering all these points, a table
of multipliers must be drawn up,
and as you can imagine this is a
job! Any & all suggestions welcome.

FCC NEWS & DATA

5901 W. BROWN DEER ROAD
APT. # 107
BROWN DEER, WIS. 53223

FM

It is my pleasure to announce some good news for FCC News and Data readers. Starting this month the FCC News and Data column will be presented in two parts -- TV and FM -- instead of in the past format of TV one month and FM the next. It is expected this change will assure that everyone gets TV and FM station news each month.

In addition Canadian station information will become a part of your monthly WTFDA bulletin. An editor is being appointed to handle this task which we believe is a much needed part of our bulletin.

With the continued growth of this organization, the increase in the size of VHF-UHF Digest, and the zealous enthusiasm of our members and editors, it appears that your DX club will continue to make great strides in the future. Thanks to all of you for your support in aiding this column and the bulletin!

STATIONS OPERATING (AS OF JANUARY 8, 1969)

Commercial FM 1938

Educational FM 362

Total Authorized Stations On Air 2300

FCC COMPLETED ACTION

New grants:

- Tampa, Fla., (WLCY Inc.) 94.9 mc., 52.29 kw.
- Brinkley, Ark., (Tri-County) 102.3 mc., 3 kw.
- *Chico, Calif., (Chico State College) 91.1 mc., 7.2 w.
- Danville, Ill., (Kickapoo Broadcasting) 99.1 mc., 50 kw.
- Horseheads, N.Y. (Chemung County Radio) 100.9 mc., 3 kw.
- Sioux Falls, S.D., (Sioux Empire Broadcasting) 93.5 mc., 3 kw.
- Rutland, Vt. (Central Vermont Broadcasting) 98.1 mc., 50 kw.
- Sheffield, Ala. (WCK Inc.) 106.3 mc., 3 kw.
- *Denton, Texas, (North Texas State Univ.) 88.5 mc., 34 w.

Call Letter Changes:

- KTUX (FM) Livermore, Calif., now KYTE (FM)
- KPEN (FM) San Francisco, Calif., now KIOI (FM)
- WKKY-FM, Erlanger, Kentucky, now WHKK (FM)
- KGW-FM, Portland, Ore., now KINK (FM)
- WABA-FM, Aguadilla, P.R., now VIVA-FM
- KSAN-FM, San Francisco, now KSAN (FM)
- WDLF-FM, Panama City, Florida, now WPAP-FM
- KUWS-FM, Newton, Iowa, now KCOB-FM
- WHBB-FM, Selma, Alabama, now WTUN (FM)
- WMIN-FM, St. Paul, Minn., now KEEY (FM)
- WBBF-FM, Rochester, N.Y., now WBFB (FM)
- WEWO-FM, Laurinburg, N.C., now WSTS (FM)
- WRSC-FM, State College, Pennsylvania, now WQWK (FM)
- WVLX (FM) Kaukauna, Wis., now WVLE (FM)

* THANKS TO *
* Bill Fait, *
* Cleveland, Ohio *
* (for contributing *
* to our FCC News *
* and Data FM *
* Statistics in *
* Feb.) *

New Call Letters Issued:

- Guntersville, Ala., (Guntersville Broadcasting) WTWX (FM)
- Mena, Ark., (Mena Broadcasting) KENA-FM
- Danville, Ky., (WHIR Inc.) WHIR-FM
- Indianola, Miss., (Fritts Broadcasting) WNLA-FM
- *Omaha, Neb., (City School District) KIOS-FM
- Seneca Falls, N.Y., (Waterfalls Broadcasting) WSEF-FM
- Burlington, Vt., (Vermont-New York Broadcasters) WVNY (FM)
- Norton, Va., (Radio WISE) WNVA-FM
- *Moorhead, Minn. (St. John's University) KCCM-FM
- *Oswego, N.Y., (State University of New York) WRVO (FM)
- Salem, Va., (WRIS Inc.) WJLM (FM)

New Call Letters Issued (Cont.):

- *Flagstaff, Ariz., (Northern Arizona University) KAXR (FM)
- *Morrison, Colo. (W. Bible Institute) KWBI (FM)
- Savannah, Ga., (Regency Broadcasting) WXLM (FM)
- Jerome, Idaho, (A.D. Lee) KFMA (FM)
- *Lincoln, Illinois (Lincoln Christian College) WLCC (FM)
- Winnsboro, La., (KMAR Broadcasting) KCRF-FM
- Fosston, Minn., (Fosston Broadcasting) KEHG-FM
- *Blacksburg, Va., (Virginia Poly Institute) WUVT-FM
- El Centro, California (Imperial Valley) KNEU (FM)

Other Changes Allowed:

- KOTN-FM, Pine Bluff, Ark., ant. to 127'
- KSTN-FM, Stockton, Calif., ERP 8.1 kw.-ant.1560'
- WK TZ-FM, Jacksonville, Fla. ant.830'-ERP to 45kw
- WBRK-FM, Pittsfield, Mass., ant. to 145'
- WJNS-FM, Yazoo City, Miss., ERP 3 kw.
- KOLS-FM, Pryor, Okla., ERP 100 kw.
- KIMA-FM, Yakima, Wash. ERP 100 kw.-ant.920'
- KNIX (FM) Phoenix, Ariz. ERP 100 kw-ant.1640'
- KPOL-FM, Los Angeles, Calif. - ant. to 540'
- KNBR-FM, San Francisco, Calif. ERP 45 kw.-ant.1240'
- WKCI (FM) Hamden, Conn., ERP 12 kw. - ant. 870'
- WWDC-FM, Washington, DC, ERP 20 Kw.- ant. 400'
- WFMS (FM) Indianapolis, Ind., ant. to 275'
- *WVHI (FM) Muncie, Ind., ERP 280 w.-ant.70'
- WMSK (FM) Morganfield, Ky., ERP 3 kw.
- WWWS (FM) Saginaw, Mich., ant. 295'
- WLLOL (FM) Minneapolis, Minn., ERP 72 kw.
- WSEF-FM, Seneca Falls, N.Y., ERP 3 kw.
- WAEL-FM, Maricao, P.R., ERP 10.5 kw.-ant.1959'
- KEIR (FM) Dallas, Tex., ERP to 20 kw.
- *WGCL-FM, Houghton, Mich., ERP 250 w.-ant.7'

ACTION APPLIED FOR OR REQUESTED

Applications For New Stations:

- | | | |
|---------------------------------------|---|----------------------------------|
| Leisure City, Fla., 98.3 mc., 225 w. | # | Oil City, Pa., 98.5 mc., 3 kw. |
| *Chicago, Ill. 88.9 mc., 10 w. | # | El Paso, Tex., 102.1 mc. 27.9kw. |
| *Greensboro, N.C., 90.7 mc., 10 w. | # | Birmingham, Ala., 99.5mc., |
| Truckee, Calif., 101.7 mc., 2.01 kw. | # | 29.5 kw. |
| Peoria, Ill., 105.7 mc., 36 kw. | # | Tulare, Calif., 106.7 mc., |
| Knox, Ind., 99.3 mc., 3 kw. | # | 852 w. |
| Manhattan, Kan., 101.7 mc., 820 w. | # | Maipahu, Haw., 92.3mc., 60.16kw. |
| Sparks, Nev., 98.3 mc., 3 kw. | # | Syracuse, N.Y., 102.9 mc., |
| Farmington, N.M., 96.9 mc., 29.6 kw. | # | 7.3 kw. |
| *Oneonta, N.Y., 89.5 mc., 10 w. | # | Carlisle, Pa., 93.5 mc., 3 kw. |
| Moncks Corner, S.C., 105.5 mc., 3 kw. | # | Falmouth, Mass., 95.9 mc., 3kw. |
| *Kileen, Tex., 88.7 mc., 93.3 kw. | # | *Reading, Ohio, 89.3 mc., 15.2w. |
| Pinetta, Fla., 101.1 mc., 100 kw. | # | Ardmore, Okla., 95.7 mc. 100kw. |
| Falmouth, Ky., 95.3 mc., 3 kw. | # | Fayetteville, Tenn., 105.5mc., |
| | | 3 kw. |

STARTS AUTHORIZED (NEW STATIONS DUE ON AIR)

- WTIM-FM, Taylorville, Ill., 92.7 kw., 3 kw.
- WDYL (FM) Chester, Va., 92.1 mc., 3 kw.
- WYNK-FM, Baton Rouge, La., 101.5 mc., 100 kw.
- WCHO-FM, Washington Court House, Ohio, 105.5 mc., 3 kw.
- WRTM (FM) Blountstown, Fla., 102.3 mc., 3 kw.
- KNEI-FM, Waukon, Ia., 103.9 mc., 3 kw.
- KKWB (FM) Breckinridge, Minn., 101.7 mc., 3 kw.
- WJNS-FM, Yazoo City, Miss., 92.1 mc., 3 kw.

STARTS AUTHORIZED (Continued)

WPQR-FM, Uniontown, Pa., 99.3 mc., 3 kw.
 KMFL (FM) Marshall, Texas, 102.9 mc, 56 kw.
 KLOM-FM, Lompoc, California, 92.7 mc., 2.5 kw.
 WHMS (FM) Hialeah, Fla., 92.1 mc., 3 kw.
 KNIR-FM, New Iberia, La., 50 kw.
 *WRVO (FM) Oswego, N.Y., 89.9 mc., 10 w.
 KINK (FM) Portland, Oregon, 101.9 mc., 97 kw.

TIDBITS AND MISCELLANEOUS ITEMS OF INTEREST TO FM DXERS

Reports indicate that WZAK-FM, Cleveland, Ohio is now dual polarized @ 27½ kw.

TV GUIDE AND TELEVISION PROGRAM LISTING EXCHANGE

As announced in past issued of VHF-UHF Digest, the WTFDA is promoting an exchange of TV program listings from different areas of the country of the United States. Canadian and Mexican program listings are encouraged to join the exchange as well. Thus far a goodly number of members have indicated interest in trading program listings from their areas. They include:

<u>name and location</u>	<u>edition or listing</u>
Morrie Goldman, 8046 Euclid, Chicago, 60617.....	Chicago edition (TVG) South Carolina (TVG) a few
Richard Tidberg, Box 119 A, Rte.2, Winnebago, Ill. 61088.....	Rockford-Madison (TVG) Pensacola-Mobile (TVG) N.Ill - S. Wisconsin prog. guide Tribune listing
Gary Olson, 5901 W. Brown Deer, Brown Deer, Wis. 53223.....	Wisconsin edition (TVG)
David Cox, Box 16, Carrolton, Ala., 35447.....	N. Alabama edition (TVG)
Jim Stiles, 1820 Normandie Ave., Hollywood, Calif., 90027.....	Los Angeles-Santa Barbara edition (TVG) Los Angeles Times listing (L.A., San Diego, Santa Barbara, Yuma)
Mark Lewis, 224 Honiton, Downsview, Ontario, Canada.....	Ontario-Buffalo, Ny listing
Bill Heusmann, 3116 Sangamon St., Steger, Ill., 60475.....	Chicago edition (TVG)
F.S. Dombrowski, PO Box 5001, Milwaukee, Wis. 53204.....	Wisconsin edition (TVG)
Morton D. Meehan, Box 276, North Palm Springs, Cal. 92258.....	San Bernardino Sun listing (L.A., Palm Springs, Bakersfield, Calif.)

Others interested in joining please send in your name and the TV Guide edition or listing you could supply in trade with another DXer. Our objective is to make many editions available to all club members. By trading program listings you will better be able to pin down unided stations as well as know the operating schedules of stations outside your area so that you can watch for them. (When sending TV Guides to others, you may save on postage by tearing off the front "standardized" portion and sending only the program listing part).

FCC NEWS & DATA

GARY A. OLSON
5901 W. BROWN DEER, #107
BROWN DEER, WIS. 53223

STATIONS OPERATING (AS OF JAN. 16, 1969)

UHF ETV	98
UHF Com	170
VHF ETV	76
VHF Com	506

TV

Total Authorized Stations On The Air 850

New Stations Reported On Air:

WRDU (TV) ch. 28, Durham, N.C., took air as independent Nov. 4
KSEL-TV, ch. 28, Lubbock, Tex., took the air Nov. 11
WCWB-TV, ch. 41, Macon, Ga., took the air Nov. 25, NBC, 760 kw.
KUDO (TV) ch. 38, San Francisco, Calif., took air Dec. 28, 843 kw.
KKOG-TV, ch. 16, Ventura, Calif., took air Dec. 14, 35.5 kw.

Stations Authorized to Start Operations:

*KHNE-TV, ch. 29, Hastings, Neb., Nebraska ETV Network
*KRNE-TV, ch. 12, Merriman, Neb., Nebraska ETV Network, 182 kw.
KECC-TV, ch. 9, El Centro, Calif., 120 kw.
WSMS-TV, ch. 51, Ft. Lauderdale, Fla., 692 kw.
WBBH-TV, ch. 20, Ft. Myers, Fla., 524 kw.
*WKHA (TV) ch. 35, Hazard, Ky., 417 kw.
WATU-TV, ch. 26, Augusta, Ga., 340 kw.
KGTO-TV, ch. 36, Fayetteville, Ark., 38 kw.

New Target Dates Reported:

WECO-TV (now WPGH-TV) ch. 53, Pittsburgh, Pa., Feb. 1969
*WMUL-TV, ch. 33, Huntington, W. Va., Summer 1969
*WLIW-TV, ch. 21, Garden City, N.Y., January or February 1969
KDNL-TV, ch. 30, St. Louis, Mo., March 1969
KMST-TV, ch. 46, Monterrey, Calif., Feb. 1969

Miscellaneous Changes Reported:

WJZY-TV, ch. 14, Jacksonville, Ill., (target Feb. 1969) will run 4500 kw., with a tower of 1610 feet in height
*WYES-TV ch. 8 and WVUE (TV) ch. 12 in New Orleans are expected to be allowed to trade channels in the very near future. The move will allow both parties expanded coverage while still keeping both stations operating according to technical interference limitations.

FCC COMPLETED ACTION

New Grants:

Tulare, Calif., (Pappas Electronics) ch. 26, 2.21 kw.
Yakima, Wash., (Apple Valley) ch. 35, -- grant reinstated to KAPP-TV
San Jose, Calif., ch. 48 (California Enterprises) 275 kw.
Dubuque, Ia., ch. 40, (Dubuque Communications) 587 kw.
Worcester, Mass., ch. 27 (State Mutual Broadcasting) 608 kw.
San Angelo, Tex., ch. 6 (SRC Inc.) 100 kw.
Toledo, Ohio, ch. 60 (Midwestern Broadcasting) 583 kw.
Milwaukee, Wis., ch. 30 (Standard Broadcasting) 270 kw.
Baltimore, Md., ch. 54 (Baltimore Broadcasting) 706 kw.
Miles City, Mont., ch. 3 (Custer Broadcasting) 10.2 kw.

Call Letter Changes:

WRVA-TV, Richmond, Va., now WWBT (TV) ch. 12
WECO-TV, ch. 53, Pittsburgh, Pa., now WPGH-TV
KRAK-TV, ch. 15, Sacramento, Calif., now KRAQ (TV)

New Call Letters Issued:

Patchogue, N.Y., ch. 67, (Granik Broadcasting) granted WSNL-TV

Other Changes Allowed:

KDNL-TV, ch. 30, St. Louis, Mo., ERP to 1060 kw. - ant. to 1100'
KXIX (TV) ch. 19, Victoria, Tex., ERP to 14.8 kw. - ant. to 490'
WSBK (TV) ch. 38, Boston, Mass., ERP to 30.3 kw.

Other Changes Allowed (Continued):

WBBJ-TV, ch. 7, Jackson, Tenn., ERP to 72.5 kw.
 KCFT-TV, ch. 42, Concord, Calif., ERP to 22.9 kw.
 WLXT (TV) ch. 60, Aurora, Ill., ERP to 183 kw. - ant. to 440'
 WKYT-TV, ch. 27, Lexington, Ky., ERP to 1382 kw. - ant. to 980'
 WCOC-TV, ch. 30, Meridian, Miss., ERP to 2.1 kw.
 WBRE-TV, ch. 28, Wilkes-Barre, Pa., ERP to 2640 kw.
 WJJY-TV, ch. 14, Jacksonville, Ill., granted waiver of rules to permit station identification cities as Jacksonville-Quincy-Springfield, Ill.
 WATU-TV, ch. 26, Augusta, Ga., ERP to 340 kw. - ant. to 1580'
 *WFPK-TV, ch. 15, Louisville, Ky., ERP to 209 kw. - ant. to 870'
 KGO-TV, ch. 7, San Francisco, Calif., ERP to 63.1 kw.

ACTION APPLIED FOR OR REQUESTEDApplications For New Stations:

*Atlanta, Ga., (Georgia State Board of Education) ch. 57, 1490 kw.
 Elko, Nevada (Washoe Empire) ch. 10, 4.29 kw.
 *Athens, Ga., (Georgia State Board of Education) ch. 34, 432 kw.
 Newark, N.J., (Ultracasting Inc.) ch. 68, 695 kw.
 *Belton, Tex., (Central Texas College) ch. 46, 182 kw.
 Santa Fe, New Mexico (Santa Fe TV Inc.) ch. 2, 2.8 kw.
 Jacksonville, N.C., (L+S Broadcasting) ch. 19, 796 kw.

Miscellaneous Requests:

Channel 2 has been requested for assignment to Kerrville-Fredericksburg, Tex., by United Tecon Broadcasting
 Channel 13 has been requested for assignment in Mt. Vernon, Ill., by a potential broadcasting corporation called Soillocom Inc.
 Public TV of the Virgin Islands desires to add ch. 3 to Charlotte Amalie and ch. 12 to St. Croix as educational reservations
 Maryland Educational and Cultural Commission requests the following educational reservations: ch. 22 to Annapolis, ch. 38 to Seaford, Del.; request asks that ch. 22 be deleted from Seaford

TIDBITS AND MISCELLANEOUS ITEMS OF INTEREST TO TV DXERS

- # KCST (TV) ch. 39 in San Diego, Calif., wants XETV (TV) in Tijuana, Mexico to surrender their ABC Affiliation since the Mexican station should have no right to serve San Diego with American network service when a local station should be doing it
- # A number of filings have been reported for new UHF allocations in the Canadian cities of Montreal and Toronto
- # TV Guide indicates that WMSL-TV, ch. 23 in Decatur, Ala., has changed to ch. 48 and is now operating out of Huntsville. New address: 5000 Governors Dr., Huntsville.
- # Some reports indicate Chicago's WFLD-TV, ch. 32 may be for sale. Rumors say the station may be purchased by Metromedia as a base station in its projected network or may be sold to an outlet desiring to make it into a pay TV station for the Chicago area
- # WBBM-TV, ch. 2, Chicago has been denied a petition for reconsideration to allow the station to continue to use translator WL3AV on ch. 13 at Valparaiso, Ind. Call letters to be deleted.
- # The FCC has substituted ch. 54 for ch. 33 in the table of assignments to (in Lynchburg, Va.) allow WNTU-TV to move to an antenna farm without interfering with other stations
- # In Watertown, N.Y., the ETV reservation has been changed from ch. 50 to ch. 16.

 # Thanks to our
 # Column
 # Contributors:
 # Mark Lewis,
 # Downsview, Ont.
 # David Cox,
 # Carrolton, Ala.
 # Morrie Goldman,
 # Chicago, Ill.
 # Dennis Smith,
 # Vasco, Calif.
 #####

Dennis Park Smith
Music Department
University of California
Santa Barbara, California 93106
Deadlines: 12th of each month

WESTERN TV DX

February 1969

This month finds TV-DX from both ground wave/trops and sporadic-E skip causes. Skip hasn't been too bad for this time of the year. Overall for the past couple of months, we find the following Es days reported (dates according to PST): Nov 17 18 28 30 Dec 2 3 7 8 10 12 25 Jan 2.

Stu Grade, 2828 So. Cornelia, Sioux City, Iowa 51106

A very slow winter here, DX-wise; only one catch to report. While home for Thanksgiving vacation from ISU I logged KESD-8 Brookings, South Dakota (xmtr at Hetland SD) on 11/27 @ 1200 CST with NET's "French Chef" and not parallel to KUSD-2 at the time. I believe that most of the time KUSD-2, KESD-8 and KBHE-9 Rapid City are parallel. SDET (SoDak ETV) has applied for Ch.10 Pierre SD. 73s & Best DX to all (Thanks for the info and DX, Stu. Hope your December vacation was good, too. dps)

Stanton K. Wigh, 2165 14th, Kingsburg, California 93631

December, as far as VHF TV DX via the ionosphere goes, was nothing to get excited about. There were about eight days in December in which Es was observed, which were:

12/ 1	0215 GMT	Spanish speaking UnId.	ch 2
12/ 3	0130	XHI Id. and ad for XEEB radio.	ch 2
12/ 4	0230	CCI to east.	ch 2
12/ 8	0200	Spanish UnId.	ch 2
	1600	KMID-2	Midland, Texas
12/11	0200	KNOP-2	North Platte, Nebraska
	0300	KCKT-2	Great Bend, Kansas
12/12	2230	KWGN-2	Denver, Colorado
	2230	KLNE-3	Lexington, Nebraska. First ch 3 in months!
	2330	KNOP-2	
12/13	0415	Misc. M.S. and weak Es to north.	ch 2
12/26	0200	XHI-2	Ciudad Obregon, Sonora Mexico

I hope the new year brings with it a good winter Es peak. So far we haven't seen a whole lot here. 73. (See remarks in my Es below, Stan. dps)

Dennis Smith—I've been cutting down my report for a couple of months to avoid extra pages so maybe I can catch up now. Our southern California inversion did not deteriorate in mid-October as I expected. 2 or 3 days after the rain, it was right back as good as ever with strong San Diego tropes. It has continued to hold between storms and is effective at this writing in mid-January for coastal VHF-UHF.

Your editor was home in Wasco CA from 19 December to 3 January. KICU 43 Visalia was found to be silent (when did it quit, Stan?). Of the 3 Fresno area UHF independents that came on Dec 1961, only KAIL 53 is still on the air. New loggings were noted with apparently regular UHF translators, all of KQED 9 San Francisco: apx Ch 73 or 74, 77, & 80, generally poor-fair videos, audios varied from nil to clear on occasion. Calls and locations unknown yet.

KLOC-TV	19 Modesto, California	270 mi.	V poor-fair, A fair. New logging
KTXL	40 Sacramento-Stockton CA	220 mi.	V very good, A clear. New logging
KAIL	53-Fresno CA	95 mi.	V fair-good, A nil

Usual winter Central Valley inversion. KLOC wasn't as good because xmtr on 3300+-ft Mt. so, above inversion. First UHF over 100 mi seen in Wasco since 1958, when KCCC-4.0 Sacramento left air. Inversion with fog 30 Dec thru Jan departure brought KLOC-19 trace, KTXL-40 up to good, and KAIL-53 fair-good with audio fair. Es:

25Dec 1620-45 PST XEFB-3 Monterrey, N.L. 1620 XEH-radio ad. UnID ch 2.

2 Jan 0859 KCKT-2 Great Bend, Kansas. K.S.N. combo ID, 0900 NBC.

XEFB-TV is new logging. There has been Mexico Es in Kingsburg this winter; perhaps XHI-2 can be seen in Wasco as Stan saw it 3 times lately. Equipment used was 1954 Zenith 21" 19L28 TV with 1962 Blonder-Tongue BTU-2S UHF Converter and 1954 Walsco VHF UHF Stacked V 46 ft above ground. Wasco TV log is now at 135 with 6 new.

Best of DX to all

Dennis

"Dealing - as it were - with the world of DX reception in the VHF radio range of 30 to 55 MHz."

Prepared by:

Bob Cooper, Jr. KV4FU
P.O. Box 1355
Frederiksted, St. Croix
U.S. Virgin Islands 00840

The Radio Paging Frequency Problem

One of the primary problems associated with monitoring the 35.22, 35.58, 43.22 and 43.58 radio paging channels is identifying the stations that you hear. Many of these stations give their physical location - ie. city and state - with each identification. Others do not however. The problem is made more acute by the apparent lack of any recent published list of stations authorized in these services, in the North American continental area.

The last known publication of such a listing was 1963; the year that Radio Registries folded. We have that list at hand, plus our own notes and the contributions of DX'ers in this realm. This is intended as a starter-listing. It is by no means complete, and there is of course chance for error even in the data listed. We encourage & even plead - that readers who have more up-to-date information send it along to this column. We will continually up-date this material through this column, and at an early date prepare a compiled listing of this list plus additions and corrections. In this listing, unk stands for unknown.

Alabama

Birmingham Unk. Unk. \

Alaska

Anchorage 35.58 KWA 635

Arizona

Phoenix 35.58 KOH 280

 43.58 KOE 257

Tucson 35.58 KCF 328

California

Bakersfield 35.58 KMD 349

Eureka 35.58 KMD 684

Fresno 35.22 KMD 342

Lodi 35.22 KMD 998

Long Beach 35.58 KMD 344

Los Angeles 35.22 KMB 309

 43.22 KMB 309

Los Angeles 43.58 KMB 309

Palm Springs 35.22 KMM 581

Sacramento 43.58 KMD 986

San Francisco 35.22 KMB 305

San Diego 35.22 KMD 691

Santa Ana 35.22 KME 438

Santa Cruz 35.58 KME 437

Stockton 35.58 KMD 347

Colorado

Denver 35.58 unk.

Connecticut

Danbury 35.58 KCC 270

District of Columbia

Washington 43.58 KGA 806

Florida

Ft. Lauderdale	35.58	KIF 651
Ft. Pierce	35.58	KIY 515
Jacksonville	35.58	KIQ 510
Miami	35.22	KIN 645
	43.58	KIE 367
Orlando	35.22	KIY 508
W. Palm Beach	35.22	KIJ 345

Georgia

Augusta	35.58	KIG 844
Atlanta	35.58	KIE 953
	43.58	KIG 300

Hawaii

Honolulu	35.58	KUA 217
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Idaho

Boise	35.22	KCK 344
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Illinois

Chicago	35.22	KSD 316
	35.58	KSC 645
	43.22	KSC 644
	43.58	KSC 644
Peoria	35.58	KSC 864

Indiana

South Bend	35.22	KSD 320
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Iowa

Des Moines	35.22	KAI 934
	35.58	KAL 880

Kansas

Wichita	35.58	KAD 927
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Kentucky

Louisville	43.58	KIF 656
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Louisiana

New Orleans	35.22	KKT 407
	35.58	KKM 579
Shreveport	35.58	KKH 470

Maryland

Baltimore	35.22	KGA 807
	35.58	KGA 807
	43.22	KGC 401

Cumberland	35.22	KGC 402
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Massachusetts

Boston	43.58	KCB 890
Springfield	35.58	KCC 266

Michigan

Detroit	35.22	KQD 303
	43.58	KQC 884
Flint	35.58	KQD 601

Grand Rapids	35.50	KQD 596
		KQD 607

Minnesota

Minneapolis	35.22	KAH 661
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Missouri

Kansas City	35.58	KAD 931
	43.58	KAF 245

St. Louis	43.58	KAA 893
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New Hampshire

Pembroke (Concord)	35.22	KCC 482
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New Jersey

Jersey City	35.58	KEC 935
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Trenton	35.58	KED 352
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New Mexico

Albuquerque	35.58	KKT 403
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New York

Albany 35.58 KEC 515
 Brooklyn 35.22 KEA 860
 43.22 KEC 745
 Buffalo 35.22 KEC 925
 43.22 KEC 521
 43.58 KEA 777

New York City 43.58 KEA 627

Utica 35.58 KEC 512

Rochester 35.58 KEC 519
 43.58 KEC 518

Syracuse 43.58 KEQ 516

North Carolina

Charlotte 35.22 KIM 905

Raleigh 35.22 KIY 409

Ohio

Chillicothe 35.22 KQD 602

Cincinnati 43.58 KQC 877

Cleveland 43.58 KQC 881

Mansfield 35.22 KQD 600

Oklahoma

Oklahoma City 35.58 KKM 248

Oregon

Portland 35.58 KCA 796

Pennsylvania

Allentown unk. KGC 226

Bethlehem unk. KGC 226

Philadelphia 35.22 KGC 223

43.22 unk.
 43.58 KGA 804

Pittsburg 43.58 KGA 805

Scranton 35.58 KGC 400

South Carolina

Charleston 35.58 KIG 853

Tennessee

Memphis 43.58 KIF 653

Nashville 35.58 KIG 837

Texas

Amarillo 35.58 KKV 658

Dallas 35.58 KKC 344

El Paso 35.58 KKT 562

Ft. Worth 43.58 KKJ 460

Houston 35.58 KKI 445

35.62 KKV 690

Lubbock 35.58 KKQ 965

Wichita Falls 35.58 KLB 323

Virginia

Norfolk 35.58 KIG 297

Washington

Seattle 35.58 KOE 259

Wisconsin

Milwaukee KSC 373

35.58

Madison 35.58 KSD 318

Wyoming

Cheyenne 35.22 KON 908

Puerto Rico

San Juan 35.22 WWA 335

Jamaica

Kingston 43.58 unk.

Mexico

Mexico City 43.57 unk.

February 1969

It is entirely possible that in addition to those new stations which were licensed after 1963 (the last year the master list from which this is drawn, was complete) that some of the stations listed herein are no longer active, or were never activated after the license was granted. The odd-frequency stations (such as Houston on 35.62) are (Bell) telephone company owned and operated paging stations, which do not - as a rule - utilize regular paging frequencies in the 35 and 43 MHz regions. I suspect there are many more of these, operated as an integral part of 'mobilephone' radio telephone facilities, than this list purports to show. There have been a number of stations licensed in the 150 MHz band for one-way signaling (paging), in recent years. These are not included in this listing since skip propagation rarely (if ever) affects this frequency range, and DX reception is limited to tropo propagation. Because of problems with skip in the 30-50 MHz region, it is possible that some of the original stations shown in this listing may have abandoned their original 30-50 MHz assignments in favor of these high frequency, non-skip plagued, channels.

If you know of additions, corrections or deletions to this initial listing, you are urged to sit right down - now - and report your late data. A postcard will do. We will then update this data in the next available column.

Call Signs

Since most FCC call letter assignments follow a pattern, it is possible to make an educated guess as to the region of the United States that a station is located in, having no more to go on than the call letters intercepted.

It appears that call letters issued in the 30-50 MHz frequency range follow a sequence roughly as follows. Certainly the paging channel stations seem to follow this sequence.

(Amateur) W1 Call District

Maine, N.H., Vt., Mass., Conn., R.I.KCA thru KCZ (KDZ?)

(Amateur) W2 Call District

New York, New JerseyKEA thru KEZ (KFZ?)

(Amateur) W3 Call District

Pennsylvania, Maryland, D.C., DelawareKGA thru KGZ (KHZ?)

(Amateur) W4 Call District

N.C., S.C., Fla., Ala., Ga., Tenn., Va., Ky. ...KIA thru KIZ (KJZ?)

(Amateur) W5 Call District

Texas, Louis., Miss., Okla., N.M., Ark.KKA thru KLZ

(Amateur) W6 Call District

CaliforniaKMA thru KMZ (KNZ?)

(Amateur) W7 Call District

Ariz., Utah, Nev., Cre., Idaho, Mont., Wyo., Wash. .. KCA thru KCZ (KPZ?)

(Amateur) W8 Call District

Chio, Michigan, West Virginia KQA thru KQZ (KRZ?)

(Amateur) W9 Call District

Illinois, Indiana, Wisconsin KSA thru KSZ (KTZ?)

(Amateur) W0 Call District

Minn., N.D., S.D., Iowa, Neb., Colo., Kansas, Mo. .. KAA thru KAZ (KBZ?)

The above is intended as a guide only, as this has not been verified by any really knowledgeable source. This is based upon observations only, and corrections are invited.

Radio Paging Activity Analysis

If you live in an area with a local radio pager in operation, chances are that you won't be able to use that channel (frequency) for DX listening. However, the activity is far from evenly spread either by frequency or by geography, as the following should show:

Radio Paging - Number of Stations Active (*)

Amateur Call District	<u>35.22</u>	<u>35.58</u>	<u>43.22</u>	<u>43.58</u>
1st	1	2	0	1
2nd	2	5	2	4
3rd	3	2	2	3
4th	5	8	0	4
5th	2	10	0	1
6th	6	5	1	2
7th	2	4	0	1
8th	3	1	0	3
9th	3	4	1	1
10th	2	4	0	2
	<u>29</u>	<u>45</u>	<u>6</u>	<u>22</u>

* - Active means either observed on the air recently, or, known to have been licensed for operation when the 1963 master list was published.

ed.

If you are picking two channels to listen on, and do not have locals in your area to drown out the DX, the 35.58 and 43.58 channels are the best choices because of greater occupancy of these two frequencies.

Unknowns

Various reporters have heard these un-identified radio pagers, as noted. Anyone knowing the whereabouts of one or more of these should report same to this column.

35.58 - KCB 891, identifies as 'Tellisco Radio Call Station'

35.58 - KCD 814

35.58 - KIY 726, a traffic light control system, identifies on CW at infrequent intervals.

'CHEAPY' VHF RADIC LISTENING

I would like to recommend an in-expensive crystal controlled converter which, when used ahead of any receiver that tunes any part of the range from 550 kc (low end of broadcast band) to 10 MHz (middle of shortwave broadcasting area), will provide you reception on any one of the 35.22, 35.58, 43.22 or 43.58 paging frequency channels.

The converter is the Universal Converter, catalog no. B20-106, manufactured by Sentry Manufacturing Company, Crystal Park, Chickasha, Oklahoma. The price tag, with crystal, is \$15.95.

Sentry sells the converter to cover any 4 megacycle section between 40 and 60 MHz, to convert that range down to any spot between 550 kc and 10 MHz. However, I have had a pair of these, one on 35.58 and the other on 43.58, converting to 7.2 MHz, for more than a year. With one of these ordered to convert 35.58 (say) down to some clear frequency in your broadcast band (say 1,000 kc), you can plug the output of the converter into any transistor BC set and bingo - you have instant monitoring of 35.58. See some of my past columns for how important this can be in spotting TV DX. Openings before they open up on TV. Check into this - it is very worthwhile. Write for Sentry's 1969 catalog for the full poop, and if you still have problems, drop me a line.

NEW CARIBBEAN FCCOUNTRY ON TV - this spring?

This rightfully belongs elsewhere in the bulletin, but being as how I'm close to the source, I'll slip it in here this month as my closer.

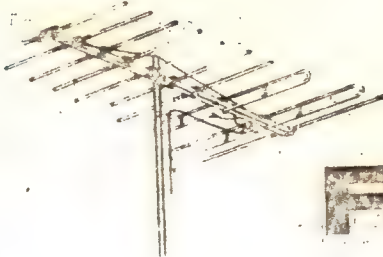
ZVI-TV, channel 3, Tortola, British West Indies (100 miles due east of San Juan, Puerto Rico) began construction on a 100-kw color equipped station in mid January. The station will be atop a 3,200 foot peak and look at the U.S.A. over an all water path. A companion channel 12 station, to be government operated and educational, was also begun at the same time.

It is rumored the station will be an NBC affiliate, plus carry CBC programs (all tape delayed) from Canada.

February, 1969

Roger W. Winsor
718 N. Fremont Road
Valparaiso, Indiana
46383

Deadline: 10th of the month



FM DX

No FM DX done here due to poor CX and active ECB listening. Only new catch is KROC-FM 106.9 Rochester, Minn. ending NBC nx and ID @10:05 on 11/29 for state #10. Hope everybody had a sobre holiday season and may 1969 be the best year yet for DX. As I start out this column this year, I would like to make a plea to all contributors. Please, if possible, send in your report as you want it to appear and also, please double space the reports. Most of you already do this, but yet, I want to make this statement now.

Dennis Smith University of California Santa Barbara, Calif. 93106

This is my first report to you as FM editor. This report goes back several months, as does some DX that I forgot to publish myself. I was home in Wasco, Calif. between terms in late March 1 968 and heard these:

22 Mar. KECR 93.3 El Cajon 15kw 235 mi w/new taller tower, same power, now seems to be more consistent;

1435 PST KSDS 88.3 (tentative) San Diego 830w @230 mi. Seemed to be tropo-scatter burst;

1504 PST KPCS 89.3 Pasadena 370 watts 120 mi tropo burst over mountains.

1503-1545 KEDC 88.5 Northridge 320 watts 105 mi, weak and fady over mtns;

XETRA 91.3 (X-TRA news, same as 690 ECB--consistent though weak during week home, seemed FM rather than AM detection, don't know if image or what. Sent report w/query, and reply letter said "This verifies your report", which didn't answer my question or prove anything).

23 March 0820-0830 PST KSFV 106.3 San Fernando in SS w/1kw @105 mi over KYMS over mountains.

The four definite new loggings were #159-162. Also hrd KUSC 91.5 IA, now consistent w/17kw. I finally found out ERP of our 10 watt KCSB 91.1 in Santa Barbara; it is 9.8 watts. It's due to change to 91.5 at anytime.

Sta Grade 2828 So. Cornelia Sioux City, Iowa 51106

Very little activity here in SC on FM. My Zenith FT10 AM-FM RX is in my dormitory room at Ames, and while home have been using a table model Zenith AM-FM. While home for Thanksgiving, logged the following: 11/25 KDSN 107.1 Denison, IA @0805, KDCR Dordt College, Sioux Center, IA @0755 on 11/26. Both are new on air. KDCR has a rather good signal, but KDSN is weak. Christmas vacation DX 12/26 KLIN 107.3 Lincoln, Neb. separate from AM-1400kHz @13:51, KKLP 93.5 Pipestone-Luxerne, Minn @1400; and KWAT 96.9 Watertown, SD @1402. All are also new on air. KWAT 96.9 is fully automated, all tapes at studio, no personell at XR. The 11/25,26 catches were without outdoor antenna, the 12/26 loggings w/Knight Colorset-55 UHF-VHF-FM antenna. While a student at Iowa State Univ. at Ames, I have little time to DX, but do listen to AmesO Des Moines locals. All to report for now: 73's and DX to all.

Michael B. Northam P. O. Box 605 Beaverton, Oregon 97005

KINK(FM) ex KGW-FM CP is now on the air on 101.9 in Portland, Ore. First noted on 12.28, but may have been on earlier, as I was out of town for the holidays. Format is underground rock in stereo. KGW owned by King broadcasting, now becomes the second station in Portland to have outlets on all 3 media: AM FM YV. The other is KOIN. KINK IDs as "Stereo 102", KPFM 97.1 IDs as "Stereo 97".

Glenn Hauser Box C 8638 Lowry AFB Colorado 80230

No FM DX here yet, but at least I'm getting some stations outside of Denver on a regular basis now. I would like to correct a few things in my report appearing in December VUD. Carbon copies of my log apparently weren't too legible or comprehensible to the editor. (and how!) 10/12 KAQY reception should have been 12 August, previously UNIDed. On 10/13 KDNM should be KCNM, of course. On 10/14 KIOD should have been KICD. Around 0930 that day, the KWNS QRM item belongs with KRVN, both on 93.1. KAQY was on MS, WFDD was Es, and all the rest on page 3 were tropes or groundwaves. On page 4 KHQ was Es, and the time was 2005. Others were tropes/GW. Following stations were new: KAQY, KSKU KMUL KDCR KMHL KICD KEYC KYSM KTFC KLEM KRVN KRVN KGBI WFDD KHQ WSWG and WAPI. Some of the better distances involved are 655 mi for WAPI tropes, 575 mi for Mankato, Minn. tropes and 1255 mi for KHQ Es. I was greatly surprised a few days ago to receive a verie letter from CHEC 100.9 Lethbridge, Alta for a report over 28 months old. This is my lowest power FM catch at Albuquerque, 249 watts! Another case of mislaying the report, they said. Until the next, 73 de Glenn.

Tom Mann 1805 E. Elmdale Court, Milwaukee, Wisconsin 53211

Just a few lines to tell you that I am still interested in FM DX. Just thought I'd give you some information about our local FM stations. WFNY 92.1 in Racine is now on with 3kw from new studios located at Tower Point, 5720 Taylor Ave. They moved from 1115 N. Maint Street. WFNY went on the air last Sept. or so with 3kw. WTOS 103.7 in Wauwatosa will have talk shows every morning except weekends, starting January 13, 1969. The new FM stations owned by the Beaver Dam Broadcasting Co. call letters are WBEV-FM 95.3. WGLB 100.1 in Port Washington, still hasn't gone on the air yet. (Tnx for the info Tom, and welcome to the fold.)

Well that's about it, as far as this end goes. On the whole, response has been good, what with this time really being a slack time. I am prompted to ask a question at this point, and that is, what is the format that you would like to see in this column? I receive a great many varied types, so just re-type them that way. It is far too difficult to re-arrange those reports that aren't just so. I am a member of the National Radio Club, and have been since 1963. In that club all DX is reported in sentence fashion, ala Glenn Hauser. I personally like the sentence form better than columns of stations, which can easily be overlooked when in a hurry. I would appreciate some comment from you fellows as to just which you like better. Back to DX, I am still on the lookout for WRIO 92.1 in Rochester, Ind, which should come in here well, but they aren't on RS yet. Also, I happened to call WOPA-FM 102.7 one night, and the jock there said a complete revision of porgramming is in the works, w/24 hour stereo, most likely underground rock like KINK. It seems they are a little bit late on getting on the bandwagon, as UR seems to be dieing out quickly. Praise be for that!

Well, that about finishes it at this end, so until next month, best of DX to all. Now off to the store tomorrow to buy some correction fluid, which my 3 year old just spilled all over my DX den floor while I was typing this. 4 females plus my wife, who is also a female, Hi, make things wild around here.

PLANNING YOUR ULTIMATE TV DXING INSTALLATION

"A FOUR PART SERIES FEATURE DEALING WITH TV DXING TECHNIQUES AND EQUIPMENT TO ASSIST YOU IN PLANNING YOUR OWN EQUIPMENT REQUIREMENTS"

by:

Bob Cooper, Jr. (KV4FU)
P.O. Box 1355
Frederiksted, St. Croix
U.S. Virgin Islands 00840

(Part One)

We all dream of the day when we will live high atop the tallest hill in our area, using the very best DXing equipment available, and set new DXing records by the score.

But we all have our limitations. For some, money is scarce. For others, DXing is a casual thing and a large investment in equipment is not practical. For still others, the neighborhoods we live in would not allow the elaborate antennas and towers which we all dream of having.

It is unlikely, therefore, that many of us will ever achieve the 'ultimate' DXing installation. But each individual can work to improve his installation, and bit by bit upgrade its capabilities. The more sophisticated the DXing installation, the greater the DXing results in pulling in those weak, distant stations, when conditions are right to produce long range reception.

The Problem

The problems with DX reception are two-fold; weak signals and interference. Weak signals can be amplified or more of the signal can be captured by installation of a bigger, better, more effective antenna system. Interference can be on the same channel, from an adjacent channel (ie. one up or one down) or in rare cases, from a nearby two-way radio transmitter.

Amplification of the weak sig-

nal and filtering out interference must all be done before the signals reach the TV receiver. This is not to say that all receivers are more or less alike but it is to say that signal-purification is much more easily accomplished ahead of the receiver. Once the combined signal ingredients enter the receiver proper, it is virtually impossible to clean the impurities out of the signal and still have the signal remain, in recognizable form.

In this series we will tackle the problems one-by-one, giving one or more solutions for each type of problem, and rate each solution against each similar solution in terms of effectiveness.

In this way you can customize your own installation, choosing the building blocks which fit both your problems and pocketbook.

Interference

Interference to the desired signal is usually more of a problem than weak signals. We can amplify a weak signal quite easily (as we will show), but if we also amplify the interference at the same time, we haven't improved the situation one bit. What we want to do is improve the ratio of signal levels appearing at the receiver, between the desired signal and the non-desired signal(s), or interference.

The key note to this entire series will be the improvement of signals to the point where they become

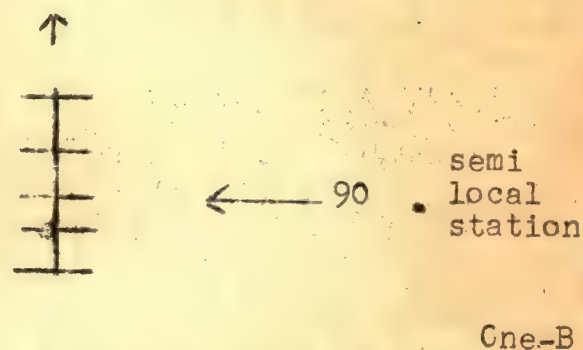
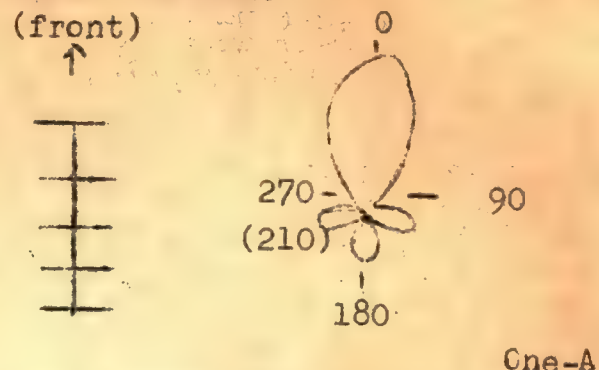
more readable, ie. stand out from both snow (noise) and interference better than they did or would have before we applied a little modern technology to the problem.

(A) Co-Channel Interference - is the most common form of interference in VHF (2-13) DXing today. There are simply too many stations operating too close together on the same channel(s). When two or more stations, operating on the same (or co) channel, are simultaneously received by a DX'er's receiver, the stronger of the signals captures the vertical and horizontal sync portions of the receiver, and it is this dominant station picture which you see on the screen. The weaker signal(s) appears as interference, laced as horizontal lines across the image that is dominant. This effect is known as co-channel (interference), and when you spot it on a channel that does not normally have this condition in your area, you know that a distant (unusual) station is trying to come through. By careful orientation with your antenna, you can peak up the co-channel (interference) lines and thereby deduce which direction the DX is coming from. But how accurate is this method of analysis? Unfortunately it is far from 100% accurate and we will explain why.

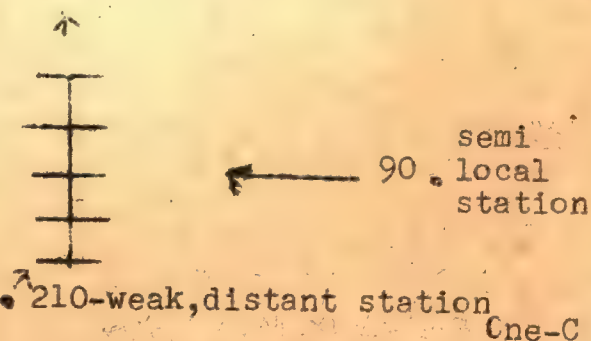
Every form of receiving antenna has a pattern. Pattern is the term applied to the antenna to illustrate on paper that the antenna is designed to receive signals better off of the front than say the side or the rear. See illustration Cne-A. Notice in illustration Cne-A that this antenna has maximum gain (largest lobe or blip) straight ahead, while it is weakest in receiving signals that approach the antenna from 90 or 270 degrees (ie. from right angles).

Now refer to illustration Cne-B. The same antenna is directed now to a point where a dominant (sem-

local) station signal approaches the antenna from 90 degrees. This cuts down to the minimum possible the antenna pick up from the semi-local station.



In illustration Cne-C, the same antenna, still directed so that it has its 90 degree lobe (minimum pick up) at the semi-local station, also happens to be oriented so that the weaker, distant station signal, is approaching the antenna from 210 degrees.



Look closely at Cne-A again. Notice the minor (secondary) lobe or pip in the antenna pattern at 210 degrees. You will notice in Cne-C that when the 90 degree point is directed at the semi-local, the 210 minor gain lobe is directed at the weaker, DX station.

In this antenna position, you have lowered to a minimum possible the signal received from the semi-local, and coincidentally raised the signal from the DX station somewhat, by heading towards it with a minor gain lobe on the antenna. In rotating your antenna array, this antenna position could well look like it is the point where the DX station is strongest. And if you mis-read this sign as an indication that your DX station was coming in from the direction that the antenna points, you would be wrong!

Illustration One-D is the dead-on heading for the DX station. But in this position your local signal is also up substantially, and the ratio of local to DX signal strengths would actually be less than if you used the heading in One-C.

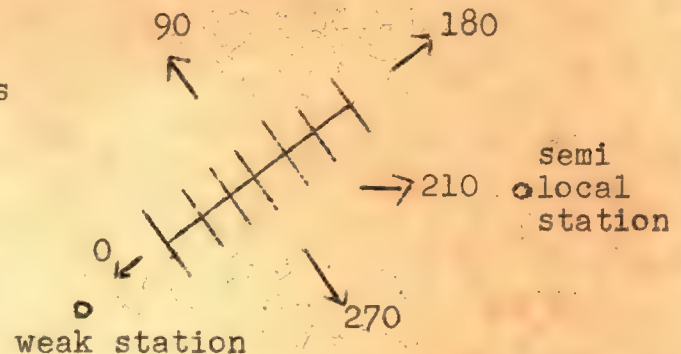
So in truth the antenna totor heading that produces the strongest co-channel interference from the DX station may not be the true heading for the DX station.

The moral is "don't simply assume that you have the true direction for the DX station, simply because the co-channel appears strongest in one particular direction."

The problem of nulling out one station to bring in another station (on the same channel) becomes more complex when there are three or more stations coming through at the same time on the same channel. The null of the antenna may drop one of the interfering stations, but bring up another one (or two).

There is NO electronic magic box which when connected to your receiver will eliminate one (or more) un-desired co-channel signals and bring through the desired station. The only way to eliminate the interference is to find a spot with your antenna where (hopefully) the interfering station drops down in strength and the desired station

comes up. The odds are about 50-50 that you will have such good fortune, and careful study of One-D should explain why this is so.



The choice of an antenna, based upon its actual receiving pattern, is one of the most important decisions a DX'er must make.

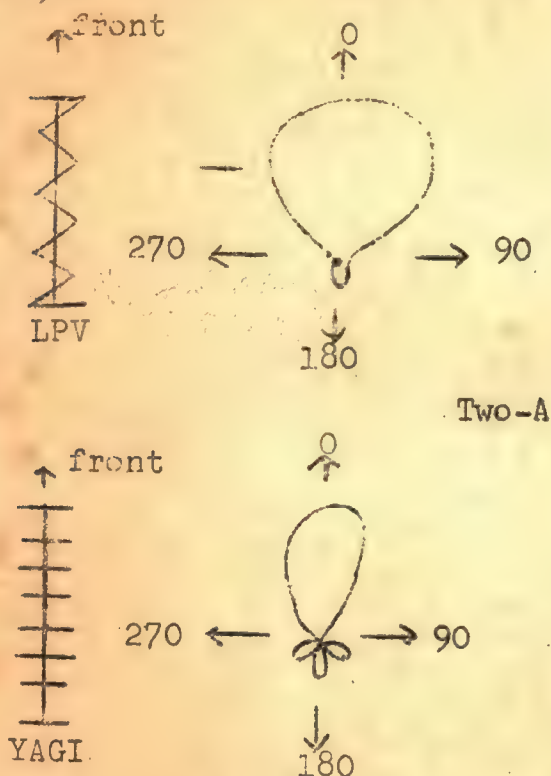
A few comments about receiving antennas at this point should serve to illustrate the complex problems the DX'er must work with.

The most popular consumer antenna on the market today is the LPV or Log Periodic. Most antennas available today are basically of the LPV design philosophy, although brand C may want you to believe its antenna is substantially different than brand J. The LPV antenna was developed to satisfy the all-channel reception craze. The basic LPV is all-channel, in the sense that it performs over channels 2-13, or, 14-83. The all-ALL-channel antennas (2-83) are actually two separate LPV's, one for 2-13 and a second for 14-83. The latter is usually stuck in front of the former on the antenna boom.

The LPV offers nearly uniform all-channel performance, working equally well (or poorly) on channel 2 as channel 6, on channel 7 as on channel 13. Its flat response (ie. nearly equal gain on all channels covered) makes it excellent for color reception.

The LPV, however, suffers from

(A) lower overall gain, on any single channel, than could be achieved with an antenna of the same or smaller physical size, in the yagi configuration, cut to that specific channel, and, (B) a quite broad front lobe (pattern), as shown in Illustration 2-A. Illustration 2-B shows a typical pattern for a yagi type antenna. Notice that the main gain-lobe for the LPV is broader, resulting in an antenna that is not as directionally sharp as a yagi (2-B).



However notice that the typical yagi has 'minor' (smaller) lobes about its shape, while the LPV does not have as many, nor are they as strong. This means that as you rotate an LPV you will get a fairly broad front pattern (maximum signal) which will taper off slowly until the antenna gain approaches a minimum. In a proper LPV, the antenna gain will stay at or near minimum until the broad front lobe comes around again.

As you rotate the yagi, the signal peaks up quite sharply when the antenna's main lobe passes through

the signal, drops off sharply, and then picks up briefly at several points as the minor lobes pass through the signal and the yagi rotates.

We will have more to say about antenna patterns later on; there are other considerations to be included in the choice.

(B) Adjacent Channel Interference comes from a super-strong station (usually local), or stations, slopping over from their proper channel, on your receiver. This is caused not by the station, but by the lack of adequate selectivity in your receiver. Within 30 miles of a maximum power low or high band (VHF) TV station, the signal level to your receiver often approaches 25,000 to 100,000 microvolts. On the other hand a good level deep fringe signal is usually between 50 and 100 microvolts (a microvolt is 1/1,000,000th of a volt). Given, for example, a 100,000 microvolt signal on channel 3, and a 50 microvolt signal on channel 2, the poor TV receiver just does not have a chance of doing a decent job on the 50 microvolt signal.

For one thing, the receiver's AGC (automatic gain control) circuit, which electronically raises and lowers the sets gain or sensitivity to weak signals, usually locks onto the strong adjacent channel signal, and because it is so strong, actually decreases the set's gain to a minimum - just when you require maximum set gain.

Part of this happens in the tuner of the set, but much of it occurs in the receiver's i.f. (intermediate frequency) amplifier stages.

There is only one cure for this problem - to knock down the signal strength of the super strong local or semi local before it gets into the receiver proper. The non-desired super strong signal must be trap-

ped, which is an electronic term that means we must absorb the energy of the station in a tuned circuit before it reaches the receiver.

Attenuating the local station signal can be done selectively (ie. you can reduce only the strong channel and not affect those either side of it).

In the 1950's the Jerrold Corporation produced a tuneable device known as a Trap-Ease. It went into your antenna downlead line, ahead of the receiver and at the set. It had two controls, one marked with channel numbers (2-6, or, 7-13 depending upon the model), and the second which acted as a fine tuning control. The first control was set to the channel you wished to trap or tune out. The second (fine tuning) control adjustment you set by eye, by watching the channel you wanted to clear up, and tuning until it became the clearest. The Trap-Ease devices were reasonably priced, but never caught on in the consumer market, probably because they were a little too complicated for the average knob twister. They disappeared from the marketplace about four-five years back and are not currently produced. We mention it here because if you ever run into one or a set (low band and high band), buy them on the spot! For DXing purposes they were great.

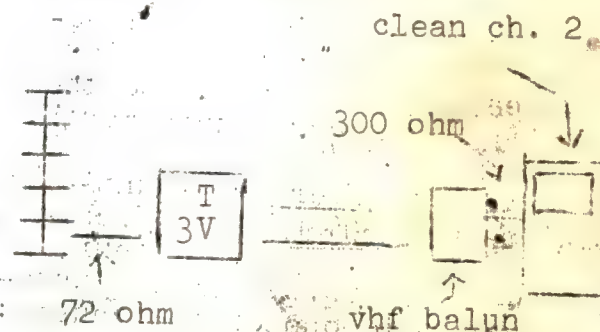
Today we can still trap out an undesired signal, but the equipment available to do the job is more costly than the Trap Ease units were, and not as flexible. Today we use CATV type tune and leave-alone single channel traps. These units must be precision adjusted using a CATV type field strength meter, to adjust for maximum trapping on the desired signal you wish to eliminate.

Such units, properly pre-set, can be taken home and installed in

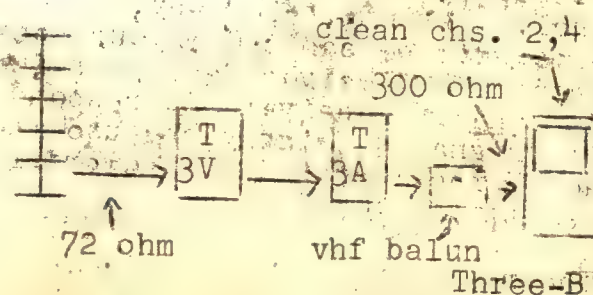
your system installation. Any CATV system technician, using CATV equipment, can adjust it for you. Once set, the trap can be forgotten for a year or longer.

The traps used by CATV systems are several times as powerful as the old style Jerrold Trap Ease. The Trap Ease could attenuate (tune down) a 100,000 microvolt signal to approximately 10,000 microvolts, when properly adjusted. The CATV trap can tune a 100,000 microvolt signal down to 100 microvolts!

Illustration three depicts how the pre-set trap for a specific channel would be incorporated into your receiving system. The trap is pre-set for either the adjacent channel video signal, or, the audio (aural) signal (carrier). For example, if your local is on channel 3, a trap for channel 3 audio will clean up channel 4 (since the audio portion of 3 is closest to 4) and a trap for channel 3 video will clean up channel 2 (the video or picture portion of 3 is closest to channel 2).



Three-A
This requires two traps. By employing the system shown in illustration 3-B, you use coaxial cable



Three-B

ULTIMATE DXING - continued

from your antenna system and run it through the series (one after the other) traps for DXing purposes, and switch around the traps for normal viewing purposes.

Do the results warrant the effort? Let's look at it this way. If you have strong locals on channels 2, 4 and 5 (low band), this pretty well wipes out channels 3 and 6 for anything but relatively strong DX. To clean up channel 3, you need a channel 2 audio trap and a channel 4 video trap. An investment of approximately \$70.00 using the Blonder-Tongue MWT series traps. This will open up channel 3 for weak traps and all of the E's there is. Channel six will cost less to clean up, because you will only have to attenuate the channel 5 audio signal. Chances are that FM, on the high side of six, will not bother it nearly as much as channel 5. If you have locals on channels 2, 4, 5, 7, 9, 11 and 13, it will cost quite a little to open up 3, 6, 8, 10 and 12 for DX. Two traps would be required for channels 3, 6, 8, 10 and one for channel 12.

A complete glossary of all equipment mentioned in this series will appear as an addendum to the series itself in the fourth month.

(C) Other Interference - until recently any reception on a TV channel of a police, fire, amateur, etc. two-way radio system was usually traceable to one of two causes: (A) a faulty transmitter, or, (B) a faulty receiver. In the case of the faulty receiver, the cure is much like the super strong TV local slopping over on an adjacent channel. A strong, close-by, two-way transmitter can cause your non-selective TV receiver (and this includes any TV receiver) to respond to its signals - simply because the broad TV receiver and the powerful transmitter are near to one another.

The remedy is a filter/trap. You

have to trap out the un-desired signal before it reaches the TV set tuner. There are many fixed frequency traps available (ie. a device tuned to the specific frequency of the near by transmitter), and there is one broadband trap that filters out almost everything that comes in below 52 megacycles. The R.L. Drake TV-300-HP is one to keep in mind when the offending transmitter is operating on a frequency below 52 megacycles. Wired between your antenna downlead and your tuner input terminals, it will do an excellent job for under \$4.00.

NEXT MONTH - this series will continue with a full treatment on antennas for DXing.

EASTERN TV DX

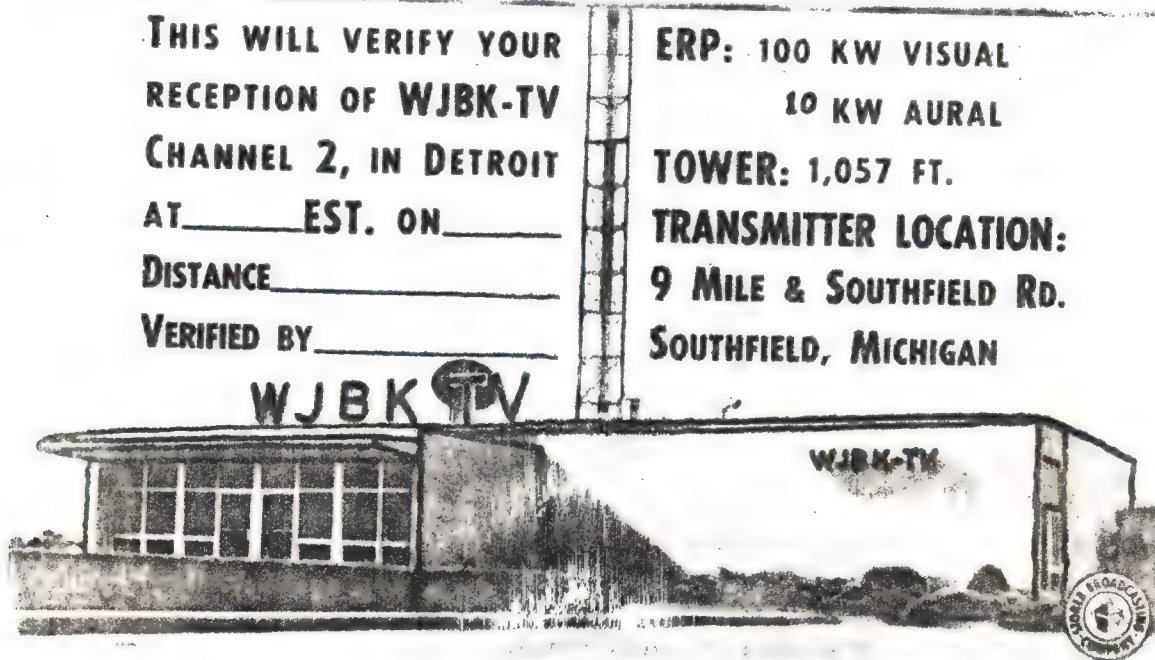
Morrie Goldman WA9RAQ
8046 S. Euclid Avenue
Chicago, Ill. 60617

This column is for all television reporters east of the Mississippi River - FEBRUARY
Deadline: 15th of each month

A Look Into WJBK-TV

Those of you who have seen and received a verification from WJBK-TV in Detroit will note that it's probably signed by WTFDA member Rod Luoma. Rod, a well known TV-DYer, has been verie signer for WJBK-TV for about ten years as well as handling a wide range of technical duties at the station. In the following report, Rod describes his duties at WJBK-TV as well as giving us an insight into the technical operations of the station.

"As a few of you know, I am a technician at WJBK-TV (channel 2) here in Detroit. Presently we have a staff of about forty-two technicians to operate and maintain all the technical equipment at the station. Due to company policy all the men have or are working on getting a first class FCC radiotelephone operators license, although these are only required of transmitter operators by the government.



At the studio we have three General Electric 4 plumbicon (pick up type) color studio cameras, two RCA 4 vidicon color film cameras and two RCA monochrome film cameras. The film cameras are used in conjunction with six RCA 16mm motion picture film projectors and three 35mm slide projectors. The pictures from the projectors are projected directly onto the faces of the pickup tubes and not on a screen as is commonly believed. The tube faces are about one inch in diameter, so as you can see, the images are quite small.

We also have five Ampex model 1200 video tape machines capable of recording and playing color tapes.

Operations may be carried on by means of two control rooms; one may be engaged in a taping session while the other is putting on the programs for air use. We have

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only one studio for live programing, so with taping and news, weather and sports coverage occurring throughout the day, its a busy place.

The video signal from the studio is relayed to the transmitter about 12 miles away via microwave at 6934 MHz with a one watt output. The audio signal is multiplexed with the video, but is used only in the event that the normal telephone line circuit fails.

The station transmitter uses a combination of RCA and GE equipment to produce 100 kw of video ERP and 10 kw of audio ERP. An older RCA transmitter is available for standby use which produces about one quarter normal power. The WJBK-FM stereo transmitter is also located here, producing 20 kw of horizontal and 20 kw of vertical ERP from an antenna at about the 500' point on the tower. Both the studio and transmitter buildings have diesel emergency generating units which start automatically in the event commercial power fails.

We also have a remote trunk which can provide color coverage from five GE cameras. Its primary use is for telecasting Detroit Tiger baseball and Detroit Lion football games, but we also have covered some Red Wing hockey, boat races and basketball.

My functions at the station are numerous due to a system of shift rotation which we have in practice. Each shift is assigned an alphabetical notation and has its particular job functions, working hours and days off. Every four weeks we advance one letter. As a result I may operate camera one month, audio another, switching another, etc. Also, the chance of boredom is reduced and everyone gets a share of both good and bad shifts. I find remote pickups usually quite interesting and often challenging, especially when I'm "painting" the color picture, attempting to make the color look natural in appearance and also to make the cameras look alike. This is especially difficult with outdoor events when the color temperature of the light source is varying due to partly cloudy skies or due to the transition from natural to artificial light that occurs at dusk. Under controlled lighting conditions, such as at the studio, this task may be approached in a much more scientific manner.

One of my favorite duties is answering DX reports, which I've been doing for about ten years. We've gotten letters from 32 states, 8 Canadian provinces and Cuba. The most distant report in recent years came from Ruskin, B.C., Canada and in January yet! Florida and Texas seem to be the favorite skip points however, and often only on rabbit ears.

Looking forward to sending each of you a verie letter, card and coverage map,
I remain sincerely yours, Rod Luoma"

DX Reports

DX tapered off quite a bit during late December and early January, showing little signs of the usual minor Es peak. A few openings were reported however, yielding only a scant number of IDs. Tropo have, in general, been poor, and even ES dropped off.

Bill Drach, Ellis Street, R.R. #2, Kewaunee, Wisconsin 54216 (CST)
DX has been at a standstill here for quite some time now. Guess I won't be seeing anything until the weather warms up a bit. The temperature has been below zero most of the time. Here's what I've seen since my last report: Nov. 23, 1968: MS C605 WSM-4 Nashville w/4p; tropo WISH-8 Indianapolis, Ind. Dec. 17, 1968: tropo 2120 WUCM-19 University Center, Mich.; WCNU-14 Mt. Pleasant, Mich. Dec. 18, 1968: 1630 WUCM-19; WCNU-14. A few days ago (dated Jan. 4) I was watching local WFRV-5 and they suddenly went off. It wasn't for long, only about five minutes, but I tuned around seeing if there was anything unusual coming in. Nothing other than the usual WNEP, WTAQ, KSTP QRA was seen. 73's a good DX. (Its too bad those breaks in transmission on locals doesn't happen more often.... Like during ID time when Es is in! Hi.. MG)

Bill Grant, 16 Goulding Street, Worcester, Mass. 01609 (EST)

Here is my shortest TV DX report yet. 12-1-68: 1930 KYTV-3 Springfield, Mo. (Es)
12-22-68: 1900 EST WEAR-3 Pensacola, Fla. (Es). That's it. 73's & best of DX.

David Shapiro, 1812 A Hillsdale Road, Lynchburg, Va. 24501

Hello gang, this is my first time reporting to this column. I have been a TV-DXer for the past ten years and use a 1965 GE portable set with rabbit ears which has VHF and UHF. My best catches from here include CMQ-6, KMID-2, CJCB-4, KBTX-3, CKPR-4 (ch.2, aren't they? MG), KHTL-4. Last July I received the signals of CMBF-4 in Havana for three hours showing their test pattern and playing American music strangely enough. Also there was some Spanish in between. 73's to you all. (Thanks for the report and welcome to the column. Your station change info has been forwarded to FCC editor Gary Olson. MG)

Jerry Pulice, 143 Gibson Avenue, Stanten Island, NY 10308

Not much DX seen lately. The only Es seen during the last few months occurred 12-22, when between 1930 and 2015 WESH-2 and WTVJ-4 were seen. Also a bit of zero offset QRM on 2, probably WTHS. WHYY-12, Del., and WGAL-8, Pa. plus occasional CCI on NYC locals are the only reception by tropes I have to report so far. The following is a list of new loggings from 1968: 5-28 Es 1950 KLNE-3 Lincoln, Neb.; 6-7 trop 0557 WDBJ-7 Roanoke, Va., 6-20 Es 1900 WWL-4, WDSU-6 New Orleans, Es 1928 WKRG-5 Mobile ALA., 7-8 Es 1930 KTTV-4 Sioux City, Iowa, 7-15 Es 2000 WCIX-6 Miami, Fla., 7-24 Es 2000 CBHT-3 Halifax, NS 8-15 trop 0630 WSYR-3 Syracuse, NY, WNYS-9 (tent) Syracuse, WRGB-6 (tent) Schenectady, NY, 9-18 trop 0620 WTVJ-11 (tent) Durham, NC. I still haven't found out the identity of "KSTL-3", that I saw during the 7-8 opening. As far as I can tell, there is no ch 3 with a KS prefix. Does anyone know if a channel 3 carries ads for radio KSTL-690? This is one Un-ID I am really curious about. I want to get a new tv with UHF next year instead of buying a UHF converter, because of the poor performance of my present set (an 8 year old Admiral portable). Two IF stages and a 2CY5 front end do not a hot "dx special" make. I wish the TV manufacturers would wise up and build some decent sets. Most TVs have less than perfect focus and interlace. Also there is no reason why 2 RF, and 4 IF stages could not be included in a high performance tv chassis. But the public is satisfied with the mediocre quality it has been getting, and will continue to get it, until the average guy sees what he is missing. Also why can't UHF tuners have RF stages? The state of the art in transistors is such that good UHF RF stages could be included in new sets cheaply. The 23" Zenith seems to be a notch above most 18" portables, although its UHF tuner is about average. I hope to have one in time for next summers DX. (Today the big thing with TV manufacturers is cost. They can make a set with 2 IFs instead of one with 4 IFs and make a good piece of change on the savings. Since modern IF stages in a TV are as much as 3 or 4 times more sensitive or more important are lower noise than their counterpart of 10 years ago, the manufacturers feel the extra one or two IF stages are not needed. Its very true a set with 4 IF would be a lot better for DX, but unfortunately there aren't enough people to appreciate them. I must agree with you that it is a mystery why RF stages are not included in UHF tuners; results would be great. About your new TV, in my opinion a Zenith is always a good choice. MG)

David Cox, Box 16, Carrollton, Alabama 35447 (CST)

Nothing new DX wise here. YSR received on 1-6 (again a south opening). I've noticed that the signal quality from YSR seems to be much better than any Mexican, with the exception of XEW-2 maybe, with Cuban stations far inferior to any I have received. Veries in from WJHG-7 Panama City, WRDW-12 Augusta Ga. (new state vfd), and WIS-10 Columbia (new state vfd). WJHG general manager, James Tighe, sent a real nice letter and booklet on Panama City. Santa Clause brought the ole boy a new Sears 9" portable TV this Xmas. It has so far suited me fine, although it doesn't have quite enough selectivity. However, the spillover hasn't hurt the DX (E.G.W. Hi) at all. On 1-7 I noticed a weak trop signal on about ch25 @ 1115. Signal gradually got strong enough to make out a few things and hear a little. At 11:40PM, noticed promos for NBC pro-

grams with Joey Bishop Show being broadcast. S/off @ 1200; didn't catch the call, but I did hear the station was ch. 24 in Meridian MS (75 mi) operating w/216kw. Can't find this one listed anywhere. Rcvd this station with the wire loop that came with the set. Best of DX to all, Dave. (Your logging is listed in the 1968 Broadcasting yearbook, but without call. The address given was care of: Weyman H. D. Walker, 4432 Jim West, Bell Aire, Texas 77401. MG)

Bill Housmann, 3116 Sangamon Street, Steger, Illinois 60475 (CST)

This month was one of the most miserable I've had in ages. I saw a tiny bit of Es QRM, so little I didn't even note it. No tropo worth mentioning, if it wasn't for MS this month would have been blank. As one who is infected with the MS bug I can't quite see why more people don't look for meteor scatter. The technique isn't that hard to learn and although the stations don't come rolling in as in Es, if you apply yourself you can add some new loggings to your totals. I've seen a total of nine stations by no other mode of propagation, I'm sure anyone else can do as well. 12-21: 0431 WJ3K in weakly, 0437 MS WCBS-2, fairly strong burst. Also at 0444, 0446, 0450, 0451 and 0454. 0522 MS UnID CBC tp on 4 w/antenna NW (CBOT?) also at 0535 w/ant. N. Because of Apollo 8 launch almost everyone on at same time w/tp. Among others saw: WMTV-9, WILX-10, WISH-8, WFBM-6, WPTA-21, WTHI-10, WTMJ-4, WITI-6, WISN-12, WTVB-17, WTV-15, WBRF-4, WOC-6, WICD-15, WCIA-3, WMBD-31. 1-1: 0241 MS unID tp w/tt, 2 SE. Type never seen before. Like bullseye, but with vertical resolution wedges replaced by grey scale, resolution square in center and dark line (CLs?) across upper vertical grey scale. Rather short burst, so quite unsure of exact look. Also at 0317. 0315 UnID tp w/tt on 2 to the east, basically bullseye type (WMAR-2??) Also at 0319 and 0322. 0336 three bursts of wedge tp on 2 east. 1-2 0451 MS WCBS on very long burst. Video in for about 15 seconds and audio for about 30. 1-3 0452 UnID modified IHTP & low tt on 4 to east and again at 0459. 0607 UnID RETMA tp 4 SW. (I agree totally that more DXers should take a crack at MS DX. It's really a thrill to be looking at a blank screen and suddenly see a test pattern pop in for a second or two. As Glenn Hauser has proven, MS also works on FM. Those DXers interested in getting started in MS DXing should look back at Dennis Smith's feature in the June 1968 VUD which also included a list of all major showers. MG)

Robert B. Cooper Jr., PO Box 1355, Frederiksted, St. Croix VI 00840 (AST)

TV TE (transequatorial scatter) began to the south here on the evening of January 10. Reception, on ch 2, was from Brazil probably Rio-de Janeiro, but no positive id. There has been some form of TV TE almost every night since. The best night so far was the night of January 14th when channel 2 in Mendoza, Argentina was quite good around 2200-2330 and channel 2 in Lima, Peru had outstanding audio near 2245. The fall TE season died around 11-27 although there were still some traces up to December 2nd. The fact that the spring season usually gets underway late in February or early March and this spring has begun nearly 6 weeks early, is encouraging for TE prospects for the coming months through early May. It should peak between April 1 and 20th and die very rapidly after that....The daytime MUF in the 30-50 range has taken a real nose dive. Just about the time the TE started up again I began even to lose the 35.58 signals from the states. There was one day a few days ago (dated 1-16) when the MUF didn't make 35.58 all day long, and that is the first such date since August here. So the path to the states is going down rapidly - as could be expected.

Bob McArthur, 11305 Lee Hwy., Fairfax, Virginia 22030

This is my first letter to WTPDA. I'm a parttime student in my junior year of college and I support myself by also working full time (this is ironic; I originally went to school so I wouldn't have to work). I've been VHF TV DXing here in the Washington DC area since June 17, 1960, when I rcvd my first skip signal, from KYTV-3, Springfield, Mo. At that time, I used a 1949 model Emerson 17" VHF only set with a rooftop 4 el. antenna. During May and June of 1961 I logged 20 states, plus NS, Quebec, and Cuba. I've changed equipment since then; I now use as Admiral 23" B&W table model UHF-VHF set, a Lafayette 28 el UHF-VHF combo antenna and as AR22 rotor. So far on VHF, I've logged 91 stations in 26 states, 5 provinces and Cuba. My most valued QSL so far is from Cuba's CMQ, confirming reception on channels 3 & 6. Oddly enough, some of the

most difficult states to log from here are the ones nearby. I've found, for example, that WHYY-12 is actually in NJ, not Delaware; this leaves Delaware with no operating stations. West Va. is also a problem. This past summer I finally logged WTRF-7 Wheeling, W. Va., but upon receiving a QSL I learned that their transmitter and tower site is in Bridgeport, Ohio. I also logged WHIS-6 Bluefield, W. Va., but I'm unable to ascertain whether their xmtr is in W. Va. or Va. I'm quite new at UHF DX, which I first tried in May of 1968 using the Lafayette antenna. During summer I logged several stations, but all were within 150 miles of here. In late September, I put up a JFD LPV ZU20 2 bay Zig A Log, and within a few days doubled previous distance with reception of WEDW-49 Bridgeport, Conn. and WEDN-53 Norwich, Conn. on Oct. 2. Since October, tho, UHF DX has been limited to occasional reception of Philadelphia and other southern Pa. stations. Although I just recently heard about WTFDA, I knew there must be a lot of TV DXers, because of all those form letter QSLs I've been receiving. (It's very true that locations can be tricky. If you can locate a copy of the Television Factbook, you should be able to find the transmitter site of WHIS or any other station. MG)

Morrie Goldman, Editor

(CST)

1-2-69: MS: 0451 WCBS-2 NY, NY for about 1 minute, KYW-3 on same burst, Un-ID-4 - all w/tp. 0505 negative vidio modulation on tp-4 to east, again at 0506; 0510 Un-ID s/on ch 4 w/American flag; 0540 trop cled wedge tp Un-ID-10 - knocked out by local WGN-9 at s/on. 1-3-69: 0424 color bars east on 5, 0430 Either end or beginning of a movie on ch 6 to SW; 0431 Un-IDed-6 w/programing to SW; 0440 Unid resolution chart w/high pitch test tone; 0457 UnID grey scale 3 east; 0545 film clip on burst w/Spanish audio; 0546 RETMA-4 south; 0547 WCIV w/IDed slide; 0550 Mod IH tp; 0553 RETMA-4 UnID; 0554 CBC-tp ch 4 UnID; 0557 UnID mod. IHtp; 0605 WKY-4 w/tp; 0606 WWL-4 w/tp; CBC-tp ch4 UnID; WKY-4 w/tp; 0625 CBC-tp on 4 again. Unproductive Es were noted here on the following days: 1-6, 1-7, 1-12, 1-17.

FANTASTIC TROP OPENING!

On January 18th, 19th and 20th, one of the most dramatic trop oponings in receint years occured, providing reported distances in excess of 550 miles. UHF distances approached the 500 mile mark! Further details including photos and reports next month.

That about concludes this months column. PLEASE remember to include your time standard with your report.

73 and BEST DX, Morrie

An Important Notice:

WTFDA is preparing a test pattern identification guide for a future issue, including all major test pattern types. As a supplement to this guide we are attempting to compile a list of what stations use what test pattern types. To do this we need your help; send a list of all stations you know the test pattern types of to headquarters. If you're not sure what the types are called, send a drawing or photo. The final results will be published to better aid DXers in the identification of stations. Your co-operation would be appreciated.

COMING SOON.....SWAP AND SELL COLUMN

For the first two months all members may place an ad free of charge. After April a small charge for ads will be required. Send all ads to: VUD Ads, C/O M. Goldman, 8046 S. Euclid Ave., Chicago, Illinois 60617

The October sunspot count was down from September, so the peak has probably been reached & we are now on the way down. From the 18th to the 30th the count was over 100 every day, (112 - 139), but then the proton event hit and ruined skip possibility.



PICTURE CREDITS: all courtesy of Bill Heusmann, Steger, Illinois;
 WCIA-3, Champaign, IL; KFDX-III, Wichita Falls, TX;
 WJIM-6, Lansing, MI; WAKR-23, Akron, OH; WLUK & WUSI.

Some new reporters to this month's CCI column as well as some different reports -- even an FM unid. Although we haven't promoted this column for FM unids, such reports are welcome and will be added to the column if it appears that there is any possibility that the mystery station can be identified.

1D

Mark Kozlowski of Buffalo, N.Y. has identified Morrie Goldman's unid "First Edition News" (reported in a past column) as WJ-TV channel 4 in Detroit.

Morrie also reports that the unid tropo station on channel three and received on 11/17/68 was WAVE as suspected.

TV

Turning to new unids, the following are from Morrie Goldman, 8046 S. Euclid Ave., Chicago, Ill. 60617

1. Dec. 13, 1968 - MS burst @ 0432 A.M., religious program on channel 6 - caught the words "the wave justice" (although this is pretty obscure, it may be identifiable since there are few stations on at this time) - direction S.
2. Dec. 13, 1968 - MS bursts of test pattern on channel 4 between 0521 and 0710, test pattern was CBC type had had accompanying tone - it was seen many times from all compass directions.
3. January 3, 1969 - MS burst at 0544 on ch. 4, had TP of custom design with "CBC" at top center and "Canada" at bottom center of test pattern - direction North. (Morrie thinks this is CBOT - can you Canadian DXers help?)
4. January 2, 1969 - 0505 and 0506 MS burst, ch. 4, white outlined TP on dark background - looked like a normal TP but in negative - direction east. (Ed note: this sounds like WRC-4 TP as I remember it, but I may be wrong)
5. January 2, 1969 - 0540 tropo, wedge test pattern on channel 10 had call letters - direction southeast (Ed note: WBNS-10 uses a wedge tp with ID on it and is in that direc.)
6. January 3, 1969 - 0430 MS burst on ch. 6, beginning of a movie - direction southwest (what ch. 6 stations would be on at that early hour?)

David Cox, Box 16, Carrollton, Alabama, 35447

1. December 2, 1968 - received a mystery tropo station carrying cartoons on ch. 17 @ 1700. Is WMCV-17 in Nashville on the air? Are they on at this time?

Bill Heusmann, 3116 Sangamon St., Steger, Ill., 60475

1. November 28, 1968, MS burst @ 0638, unided test pattern with white square on black background with vertical line at left - channel 3 to direction northwest (Ed note: Are you sure this is a test pattern or is it a sync generator pattern sometimes used by stations on the air without identification) Note: Bill wonders if this is KDAL-3 in Duluth.

FM

Turning to our FM unid, Bill Bens, 5575 Spruce Wood

Dr., Cincinnati, Ohio, 45239 gives us this brainteaser:

1. Saturday July 27, 1968 @ 1714 EST a station on 96.1 mc., announces "With you and good music in mind, this is CFBC FM stereo, the golden sound from St. John's." (received via E-skip) The Jones log lists CFBC on 98.9 with CHNS-Halifax, N.S., on 96.1 mc. A letter from the C.E. of

CFBC says that the stations have not switched frequencies and that CFBC is on 98.9 mc. The C.E. said that CFBC was part of an Atlantic Province Network with CKRM 97.7 mc. in Kentville, N.S. Bill wonders if CHNS is also tied into this network and if CFBC is the feed station or if the CFBC ID (heard twice on 96.1) was accidentally broadcast by CHNS?

LATE CCI REPORTSJim Stiles, 1820 Normandie Ave., Hollywood, Calif. 90027

1. 7/28/68 - ch. 2, skip, 2:07 PDT, Tennessee Tuxedo cartoon followed by an Earl Schieb car wash commercial with local dealer tags - distance northwest (2:07 P.M. - not A.M.)
2. 7/28/68 - ch. 2, skip, 3:26 P.M. PDT, a jungle scene or program like Gilligan's Island with tropical scenes in it followed by station ID slide at 3:29 P.M. On top of the ID slide the word "channel" was printed in capital letters in the form of a semi-circle. Underneath was a large "2". The 2 was rather tall and not of a modern design. Below the "2" was another semi-circle of printing (which may have contained the call letters and/or city) - direction northwest. Note: might this station be a Canadian since Canadian ham skip was hitting on 28 mcs. at the same time? (Ed. Note: doesn't WBAY-TV have a large ID slide like jim described?)

FLASH --- NEW EDITOR FOR CCI

Next month the CCI column will have a new editor. Bill Heusmann, 3116 Sangamon St., Steger, Illinois, 60475.

Please give Bill the continued fine support you have given me. We know he will do a fine job for WTFDA.

Bill will be the CCI editor effective immediately, so all reports should go to him from now on.

DX NEWS ITEMS OF INTEREST!!!!

"Secondary Channel Test Started by WNYC-TV" (from Broadcasting)

"Municipally owned WNYC-TV New York is conducting an experiment involving telecasting of its programs on its regular channel (31) and another one (77) to ascertain if this method will improve reception during the period when twin 110-foot towers of the World Trade Center are under construction.

WNYC-TV began the experiment on October 10 ... under a temporary authorization from the FCC. If tests are successful, programs on VHF channels 2,4,5,7,9,11, and 13 may be simulcast on secondary channels in the UHF band, which are not used in New York. It is the viewing area northward from the Empire State Building this is expected to be plagued by 'ghosts' for eight months to two years during the construction of the trade center. Tv stations in New York transmit from atop the Empire State Building, but eventually will shift to one of the trade center's towers."

"Zenith Praises FCC On Pay TV Go-Ahead, Outlines Own Program" (excerpts from Wall Street Journal)

"Joseph S. Wright, chairman of Zenith Radio Corp., praised the FCC's recent authorization of subscription television on a national basis..."

"A Zenith affiliate, Teco Inc., is licensed by Zenith to promote and commercially develop Zenith's Pay TV systems in North America. Under the system, subscribers receive decoding devices that permit the viewer to unscramble Pay TV broadcasts and to record shows viewed."

"The Zenith announcement followed one by RKO General Corp., that its experimental pay television station, WHCT-TV in Hartford, Conn., will close down Jan. 31 after incurring heavy losses over the past 6½ years."

STATISTICS

EDITOR: Glenn Hauser
Box C 8638, Lowry AFB
Colorado 80230, USA

FEBRUARY 1969
Vol. 2, No. 2

First, a question: would you like us to run a listing of the total number of stations each reporter has received, like in the AIPA column? Comments, please. And please note that our deadline is the 20th of the 2nd month before publication. Thus, channels 8 and 18-21 records should be here by 20 February. Late additions may be sent in up to the 10th of the month preceding publication. NOTE: Please specify any high band records that were the result of ionospheric propagation, i.e. Es, MS, aurora, instead of trop.

CHANNEL 6 TVDX RECORDS

Call	Location	Miles	DXer, Location	Comments
WBRC	Birmingham AL	1135	Fred Nordquist, W.S.M.R. NM	was ch 4
KULT	Tucson AZ	1215	B. J. Bingham, Festus MO	
KVIQ	Eureka CA	1010	Glenn Hauser, Albuquerque NM	
KVIE	Sacramento CA	810	Glenn Hauser, Albuquerque NM	
KSBY	San Luis Obispo CA	1295	Ed Shorey, Derby KS	
KRMA	Denver CO	1370	Norm Erint, Kenmore NY	
KREZ	Durango CO	165	Glenn Hauser, Albuquerque NM	was KJFL
WNHC	New Haven CT	1180	Bedford Brown, Hot Springs AR	now ch 8
WCIX	South Miami FL	1190	Morrie Goldman, Chicago IL	
WDIC	Orlando FL	1530	Ron Boyd, Truro NS	
WCTV	Tallahassee FL	1325	Glenn Hauser, Albuquerque NM	
WCIX	Nampa ID	1405	Ferdinand Dombrowski, Okauchee WI	now off air
KYLE	Pocatello ID	1185	B. J. Bingham, Festus MO	now off air
WFBM	Indianapolis IN	1235	Fred Nordquist, White Sands Missile Range NM	
WOC	Davenport IA	1325	Morris Foote, Middleton ID	was ch 5
KTVB	Empire KS	1630	Ghislain Girard, Arvida PQ	
WRSD	Paducah KY	845	Art Friese, White Plains NY	
WDSU	New Orleans LA	1760	Robert Cooper, Fresno CA	
WCSH	Portland ME	1095	B. J. Bingham, Festus MO	
WJIM	Lansing MI	1875	Robert Cooper, Fresno CA	
WLUC	Marquette MI	1240	Don Ruland, Holly Hill FL	
KMTB	Austin MN	1385	Bill Fulton, Yuma AZ	now KAUS
WDSM	Duluth MN	1250	Fred Nordquist, White Sands Missile Range NM	
WABG	Greenwood MS	1145	Dave Siddall, Hyannis MA	
KMOS	Sedalia MO	1165	Jeff Kadet, Needham MA	was KDRO
KHPL	Hayes Center NB	1290	William Hider, Binghamton NY	
WOW	Omaha NB	1310	Dennis Smith, Wasco CA	
KAVE	Carlsbad NM	1195	Bill Draeb, Kewaunee WI	
WHAM	Rochester NY	1130	R. Sanders, Stillwater OK	
WRGB	Schenectady NY	2380	Robert Cooper, Fresno CA	later ch 5, WROC, now ch 8
WEET	Wilmington NC	1105	Glenn Hauser, Enid OK	was ch 4
WDAY	Fargo ND	1385	Norris Doyle, Pittsburg CA	
WTVN	Columbus OH	980	Bill Stanley, Deer Park TX	
KOBH	Tulsa OK	1405	Norris Doyle, Pittsburg CA	
KOIN	Portland OR	2135	Robert Seybold, Fredonia NY	
WJAC	Johnstown PA	1050	Glenn Hauser, Oklahoma City OK	was ch 13
WPIL	Philadelphia PA	1240	Glenn Hauser, Enid & Oklahoma City OK	
WTEV	Providence RI	1265	Dave Pomeroy, Lawrence KS	
WGBS	Augusta GA (SC)	1395	Glenn Hauser, Leadville CO	via CATV
KPIO	Reliance SD	1180	Dennis Smith, Wasco CA	
WATE	Knoxville TN	1295	Fred Nordquist, White Sands Missile Range NM	
KFTM	Beaumont TX	1210	Dave Nieman, Buffalo NY	
KRIS	Corpus Christi TX	1520	Morris Foote, Middleton ID	
KOEN	Temple TX	1360	Morris Foote, Middleton ID	
KCMC	Texarkana TX	1405	Morris Foote, Middleton ID	
				now KTAL, Shreveport LA

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KSYD	Wichita Falls TX	1525	Doris Johnson, Longview WA	now KAUZ
WTVR	Richmond VA	1115	Glenn Hauser, Enid OK	
WHIS	Bluefield WV (VA)	920	Glenn Hauser, Enid OK	
KHQ	Spokane WA	1850	Robert Seybold, Fredonia NY	
WITI	Milwaukee WI	1720	Dennis Smith, Wasco CA	
CHAT	Medicine Hat Alta	1155	Bill Draeb, Kewaunee WI	
CHCA	Red Deer Alta	1315	Bill Draeb, Kewaunee WI	now CKRD
CHEK	Victoria BC	180	Doris Johnson, Longview WA	
"CBWT"	Winnipeg Man	1275	Fred Nordquist, W.S.M.R. NM	
QUON	Saint John's Nfld		was "CBWFT"; ch 4, 3 as "CBWT"	
CJCB1	Inverness NS	1400	Frank Wheeler, Erie PA	
CFCL	Timmins Ont	1350	Bill Heusmann, Steger IL	properly CJCB-TV-1
"CBLT"	Toronto Ont	1170	Glenn Hauser, Enid OK	
"CBMT"	Montréal PQ	1125	Glenn Hauser, Oklahoma City OK	
CKCK2	Willow Bunch Sask	1400	Glenn Hauser, Enid OK	
CHSS	Wynyard Sask	1175	Fred Nordquist, W.S.M.R. NM	properly CKCK-TV-2
CMJL	Camagney Cuba	1310	Randy Miltier, Campbell CA	was CKOS-TV-3
CMQ	La Habana Cuba	1320	Bedford Brown, Hot Springs AR	
XETV	Tijuana BCN	1385	William Hider, Binghamton NY	
XHT	Guadalajara Jal	1370	Bedford Brown, Hot Springs AR	
XET	Monterrey NL	1140	Glenn Hauser, Enid OK	was and now XEHL
XHZ	El Zamorano Gro	1325	Bedford Brown, Chicago IL	
XEWB	Hermosillo Son	1065	Glenn Hauser, Enid OK	
WIPR	San Juan PR	1310	B. J. Bingham, Festus MO	
		1185	Don Ruland, Holly Hill FL	
TOTAL for 69 stations:		88085		

Analysis. Come on, now! There must be more of you out there who are keeping quiet about your records. It's getting pretty bad, hi, when your editor has to supply 15 of them. Fred Nordquist follows with 6; and B. J. Bingham, Bedford Brown, and Morris Foote each has 4. By distance, Hauser has 16055 miles; Nordquist 7365; Cooper 6015; Foote 5610; and Brown 5195. Some unseen stations are CJPM Chicoutimi PQ, CHSJ1 Bon Accord NB, XHBL Culiacán Sin, and XHAJ Las Lajas Ver. And I've uncovered no skip reception of KREZ and CHEK. ... My gleaning of early Radio-Electronics TVDX columns reveals a number of pre-channel-change records for the older stations; they are certainly no less worthy of note because of the time elapsed and subsequent operation on a new channel.

ADDITIONS AND REVISIONS TO CHANNEL 2 TVDX RECORDS

WCBS	New York NY	2510	Robert Cooper, San Jose CA	
KUSD	Vermillion SD	1305	Lance Muller, San Diego CA	
KPRC	Houston TX	1990	L. A. Canning, Halifax NS	was KLEE
KTWO	Casper WY	2150	Ross Harvey, Goose Bay Labrador	
XHI	Ciudad Obregón Son	850	Stanton Wigh, Kingsburg CA	

ADDITIONS AND REVISIONS TO CHANNEL 3 TVDX RECORDS

KLINE	Lexington NB	1210	Randy Miltier, Campbell CA	
WLWC	Columbus OH	935	R. Ballew, Fort Worth TX	now ch 4
WDTV	Pittsburgh PA	1090	R. Ballew, Fort Worth TX	now ch 2, KDKA
WTMJ	Milwaukee WI	1220	L. A. Canning, Halifax NS	now ch 4
CKOS	Yorkton Sask	1340	Randy Miltier, Campbell CA	
XHQ	Culiacán Sin	2015	Karl Aiken, Kingston Jamaica	

ADDITIONS AND REVISIONS TO CHANNEL 4 TVDX RECORDS

WBRC	Birmingham AL	1080	A. C. Olberg, Clearbrook MN	now ch 6
WBKB	Chicago IL	980	R. D. Waite, Orlando FL	now ch 7
WOI	Ames IA	1175	W. J. Golden, Oak Bluffs MA	now ch 5
KHTL	Superior NB	1170	Lance Muller, San Diego CA	
KOB	Albuquerque NM	1850	Maurice Dubreuil, Lavaltrie PQ	
WRGB	Schenectady NY	1230	F. C. Meyers, Belleville KS	now ch 6
WSYR	Syracuse NY	1340	R. Ballew, Fort Worth TX	now ch 3

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WLWT	Cincinnati OH	730	Maurice Dubreuil, Lavaltrie PQ	now ch 5
WNBK	Cleveland OH	1045	R. Ballew, Fort Worth TX	
			now ch 3, later KYW, now WKYC	
WMCT	Memphis TN	1190	E. W. Fenderson, Portland ME	now ch 5, WMC
KJAC	Port Arthur TX	1375	Lance Muller, San Diego CA	was KPAC
WTAR	Norfolk VA	1125	H. L. Gerischer, Slayton MN	now ch 3
CMUR	La Habana Cuba	1460	Ferdinand Dombrowski, Watertown WI	now CMBF

ADDITIONS AND REVISIONS TO CHANNEL 5 TVDX RECORDS

WOC	Davenport IA	900	Maurice Dubreuil, Lavaltrie PQ	now ch 6
WAVE	Louisville KY	1160	William Bashta, Albuquerque NM	now ch 3
WABI	Bangor ME	1260	Don Ruland, Holly Hill FL	
WHDH	Boston MA	tie	Morrie Goldman, Chicago IL	
KTXT	Lubbock TX	880	Lance Muller, San Diego CA	
WSAZ	Huntington WV	685	Maurice Dubreuil, Lavaltrie PQ	now ch 3
CHOV	Pembroke Ont	110	Morris Sorensen, Emsdale Ont	

REVIEW BY GLENN HAUSER OF "DX TELEVISION" ISSUES 6 & 7

The France DX TV Club, in an exchange with WTFDA, has sent two more issues of their quarterly bulletin. There is heavy emphasis on tech articles, but No. 7 contains some logging reports in greater detail and quantity than ever before. Perhaps this is partly the result of our influence.

An article written by VP Claude Viguiet begins in No. 6: "Theory and Construction of High Gain Low Noise Antenna Amplifiers." He concentrates on the "reflectometre," for impedance matching and SWR reduction. Accompanying the article are five schematics.

No. 7 is one of the largest to date: 8 pages plus cover. Five of them are a continuation of Viguiet's article, now explaining how to transistorize the unit. There's a schematic of an amplifier using four 2N918 or 2N2369 transistors, designed for 40-85 MHz, 32db gain, 6.5 db noise, 75 ohm in and out. Then there's a detailed table of the electrical characteristics of the 2N918 at 25°C, with the 2N2369 to be covered later.

Also in No. 7 is a resumé of the DX reception of M. Robert Peltier, Conflans, who operates "DX TV Station No. 277". He's well equipped, with two multistandard receivers, and ten antennas, some rotatable for DX, some fixed for local reception of France, Belgium, Luxembourg and Germany; seven programs in all. There follows a DX report for last summer. The only highbinder is ch E7 (R?) Poland, audio only, on 26 May at 1400-1545.

Times presumably CET. A sample:

4 May	1720-1830	E3	Spain	17 June	1220-1345	C2	Poland
7	1300-1450	C3	Italy	20	1030-1120	C2 & E2	Sweden
8	1200-1500	C3 & C2	Russia	23	1415-1435	E3	Yugoslavia
	1330-1430	C3	Poland	24	1810-1935	C3	Sweden
	1800-1820	C2	Italy		1935-1950	E3	Norway
18	1350-1400	C2	Spain	30	0855-0945	C2 & E2	Bremerhaven, Ger.
26	1820-1850	E2	Spain	1 July	1850-1855	C3	Portugal
3 June	1240-1305	C2	Norway	2	1820-1845	E3	Sweden
4	1905-1940	C2	Holland (?)	9	1030-1115	C3	Raichsberg (SWF), Germany
14	2020	C3	England				It's not clear what the distinction is between "E" and "C" channels....

Finally, May 1968 DX of M. Otton Czechtz, who has a more southerly location, somewhere in Italy. (Non-duplicative extracts):

4 May	1230-1600	B1	BBC1	18 May	1320-1550	B2	BBC1
12	1205-1300	R1	Czechoslovakia		1550	E2	Spain
15	1730-1815	E2	Portugal	19	1120-1305	B3	BBC1
	1830	E3	Spain		1615-1630	E2 & E3	Sweden
	1835-1903	E2	Portugal	22	1725-1900	E4	Spain
18	1140-1200	E2	Ireland	30	1405	R1	Russia
	1225	E2	Norway		1450-1550	E3	Yugoslavia
					1745-1915	E3	Portugal

It should be interesting to compare the above reports, presumably all sporadic E, with our own DX on the same dates. Anyone wishing more extensive reprints, please contact this editor.

73 de Glenn

PART IV: ALL ABOUT TRANSMISSION LINES

SELECTING A T-LINE FOR DX

With few exceptions, only the lowest loss T-lines should be used for DX. Rather than note the best and add the "ifs" and "buts", I'll comment on each individually. The type (and manufacturer), DB loss, noise pickup, and installation are noted for each. (The dry and wet losses are approximate, expressed in DBs per 100 ft. Catalogs are 1969, annual.)

Flat-

If only one idea is remembered from this series, make it this: Never use flat T-line outdoors for DXing. The loss of flat line, quite high at high frequencies, jumps tremendously at all frequencies when wet. (For example, only 1% of power is left at ch. 19 with wet flat line!)

Type: Belden 8230 (Allied, p.403, \$2.22/100 ft.) or Belden 8225 (Lafayette, p. 315, \$1.97/100 ft.)

DB Loss:	100 Mhz	500 Mhz	1000 Mhz
	Dry 1.2 DB	Dry 3.2 DB	Dry 5.0 DB
	Wet 7.3 DB	Wet 20 DB	Wet 30 DB

Noise Pickup: Moderate, usually no problem except close to neon signs or machinery. Like all T-lines, except 300 ohm shielded and coax, flat line will serve as an antenna (especially if run horizontal and broadside to transmitter). This will cause some phase shift and degradation of color TV or multiplex FM signals.

Installation: Very easy. However, line deteriorates after a few years and must be replaced.

Open-

Lowest loss of all. This is the ideal T-line to use if loss only is considered, if carefully installed, and when man-made noise is no problem. Especially good at UHF or when long runs are required.

Type: Allied, p. 403, \$3.29/100 ft. or Lafayette, p. 312, \$3.25/100 ft.
(Manufacturer is probably Saxton Products, Yonkers, N. Y.)

DB Loss:	100 Mhz	500 Mhz	1000 Mhz
	Dry 0.5 DB	Dry 1.9 DB	Dry 4 DB
	Wet 1.0 DB	Wet 4 DB	Wet 8 DB

Noise Pickup: Slightly more than flat. Might be a problem for color, but not B & W. (Power mowers, shavers, etc. have been operated within 10 ft. of my open wire with no effect on picture with 1962 and 1963 Zenith B & W TV sets.)

Installation: Difficult. No mast standoffs are available in major catalogs. I used a good grade round T-line from antenna to roof, then open wire supported by "nail-type" roof standoffs for open wire. In contaminated areas, open line might have to be replaced in two or three years.

Round-

In this general class are tubular, tubular filled, oval, etc. If open line cannot be used, this is usually the next best choice; it is the most popular type used for DX.

Type: Belden 8230, 8235, 8275, 8285 (Allied, p. 403, Lafayette, p. 315, approx. cost \$5/100 ft.)

DB Loss:	100 Mhz	500 Mhz	1000 Mhz
	Dry 1.1 DB	Dry 3.0 DB	Dry 6.0 DB
	Wet 2.5 DB	Wet 6.8 DB	Wet 12.0 DB

Noise Pickup: Slightly less than flat.

Installation: Fair. Hard to fit through some standoffs and hard to attach to some antennas. Has longer life than previous two types.

300 Ohm Shielded-

This is the best for color. It's a compromise between fairly low loss (more than round

but much less than coax) and immunity to man-made noise. The shield also reduces signal pickup due to the line itself, which could subtract from the principle signal. It's probably a good choice if a color set is used for family viewing and DXing.

DB Loss: About 20% greater than round. (Since this is a fairly new type, I don't have loss characteristics for many types.)

Noise Pickup: Very little, its greatest advantage.

Installation: Fair. Easy to run, but difficult to strip, feed through standoffs, and attach to some antenna terminals. Should last longer than previous types.

72 Ohm Coax-

Loss is the greatest by far with coax, although moisture has almost no effect. At UHF, dry loss is too high for serious DXing. The main advantage of shielding can be duplicated with 300 ohm shielded line, without sacrificing gain and buying baluns. However, this type is OK at VHF if (a) length is 50 feet or less, (b) noise is extreme, (c) line must be routed through or over metal.

Type: RG/59U (Allied, p. 403, \$8.95/100 ft.) or Belden 8228 (Allied, p. 403, \$6.17/100 ft.)

DB Loss: Dry loss for RG/59U is 3.7 DB at 100 Mhz, 9.6 at 500 Mhz, and 14.5 DB at 1000 Mhz; for RG/11U (not offered in most catalogs), dry loss is about half of RG/59U. In foreign countries, lower loss coax is available and is used almost exclusively.

Noise Pickup: With 300 ohm shielded, lowest of all.

Installation: Very easy. Should last two or three times as long as previous types.

From the above, it is obvious that each DXer must evaluate his own set up. If lowest noise is mandatory, select open line, install it very carefully, but be prepared to replace it in a few years. At the other end of the line, coax lasts the longest, costs the most, is the easiest to install, but has the highest loss. Never use coax for UHF. Shielded type compromises, with emphasis on reduction of noise and ease of installation. Round type compromises also, but lower loss is emphasized.

73's Dave

LATE·HQ·NEWS:

As mentioned in the Eastern TV column, we are preparing a complete guide to test patterns, with pictures. Therefore we would like to request that you send us negatives that we may have a comprehensive pictorial feature. It is possible that some DXers use different names for standard patterns than others, so when you tell which stations use which patterns, include a rough sketch (with coloring or shading differences noted) or a print or negative. (Negatives are preferred.) For example, bullseye a very broad description that will fit almost any North American test pattern except the RETNA and color-bar types.

I recently heard from Art Collins, (former president of the AIPA), and Tom Hidley, (co-host of the 1960 AIPA convention). Art said: "Tnx for the sample bulletin; its a good one, too! I see there are many of the old AIPAers in the club. Say hello to them for me sometime."

Tom said: "It was indeed a thrill and a wonderful feeling to hear from some of you again." (He refers to a Telephone call about 2 months ago in which we phoned Art and Tom both.) "A span of years has passed by since a number of us got together at the 1960 AIPA convention. This I shall always treasure, and live the past again and again. Received the DX bulletin, (sample). It was great and well put together; thanks." That phone call was a great thrill for us on the calling end, too. After so many years. Both men are pushing 70; Art long ago gave up all DXing, but Tom is still active. (He gave up retirement to go back to work as a draftsman. He DX's and installs TV antennas on the side, too.)

Roger Bunney informs me that BBC-1 also uses test card "F" now. Previously only BBC-2 on UHF used it. (No ID is given on the card.)

WORLDWIDE TV-FM DX ASSN.
Box 5001, Harbor Station.
Milwaukee, WI. 53204

THIRD CLASS--

news matter....

return requested.